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Editorials

WE HAVE SOMETHING TO SELL

We uote from the Extension remarks of Honorable Samuel B. Pettengill of Indiana in the House of Representatives June 16, 1938, as follows:

Our great failure is that we have stopped advertising the American system to ourselves. I used to think, why is it necessary for Ivory soap to remind me every week that it floats? But I am told that as soon as Ivory soap curtails its advertising program its sales begin to fall off.

What has American enterprise failed to sell? The idea that ours is the greatest liberal Government in the world's history. The only sense that Americans in the mass are conservatives is that they want to conserve their liberties.

Let no one believe that this movement to the center, this abdication of constitutional rights by the citizen, the city, the county, and the State, this concentration of power—let no one be so fatuous as to believe that this is a liberal movement. It is a reactionary, a Tory movement.

Make no mistake! The Declaration of Independence and the Constitution were not written by reactionaries, nor was the Revolutionary War won by Tories.

We have something to sell, both tangible and intangible, and it is as nearly pure wool as this old world has ever been.

The Revolution was not won by summer patriots nor sunshine soldiers. It was won by the bloodstained snow of Valley Forge. The Civil War was not won by the "Don't Stick Your Neck Out Club." It was won by the empty sleeve. The struggle today cannot be won by the "Let-George-do-it" boys. Sacrifice alone built this Republic, and sacrifice alone will save it, if it is to be saved.

Nor can this issue be postponed to await your convenience. The next 5 years, and in part the next 5 months, will almost certainly tell whether you will bequeath to your boys and girls the legacies you received from your fathers.

In Bible times a shibboleth separated friend

and foe. Today we need but one countersign for public service—devotion to constitutional freedom. * * *

OUR GOOD NEIGHBORS

If political legislation and interference are going to invade the practice of medicine we should more than ever curiously pry into the effect of the last six years' political invasion and management on our good neighbors. The physicians' good neighbors are not precisely Central and South Americans but the merchants, manufacturers, farmers, employees, bankers and the professional men of this country. Theoretically each of these groups asks the opportunity to do good work and the chance to secure a return from it adequate for current living and for future days of infirmity. In times of stress and strain and particularly in times of business depressions it is typical of the human mind to seek elsewhere to place the blame. Seldom does the victim of his own cupidity or mismanagement accept in truly adult fashion the responsibility for his own mistakes. Seldom in the midst of a situation such as the recent or current depression with its world-wide causes is a man able to see beyond his neighbors—his immediate horizon. Unwilling then to accept his share of a situation he helped to create, perhaps helped only in a passive way, and not being possessed of far vision he must perforce blame his neighbors.

Thus we come to a situation in which the banks and bankers are held responsible for a financial panic; in which manufacturers and employers generally are thought to be preying on labor; in which merchants and distributors of goods are called profiteers; in which organized labor is blamed for obstructionist and sabotage policies; in which farmers and producers with excesses of their harvests can only at great difficulty achieve profits; and in which professional men are accused of not eagerly offering and arranging their services for the general good. In this latter group largely the lawyers, architects, creative engineers and physicians are included.

But a particular "profession," if such we might term it, has excepted itself from all blame. This in itself has the sound of adolescence about it and truly these individuals are in the youngest group of all. While its ideas are adolescent in character it is just aborning with its immaturity of a mere fifty to seventy-five years. This is the social welfare group. They have, let it be repeated, the right lusty adolescent trait of knowing all the answers. To the credit of the lot there is a corps of serious thinkers and hard workers among them working as agents of the public in the administration of many difficult personal problems. But the group is afflicted with idea men—self-appointed and self-admitted geniuses of the public interest. Whereas civilization has had to creep forward through its countless years they are "prepared" to bring it along in leaps and bounds.

Their method is plain—to stigmatize the group to be affected and then to legislate for them on the basis of the stigma.

What have they done for our neighbors? They have legislated the banks into such a sound and liquid state that they can not easily manage their former type of loans which frequently stimulated industry. Their liquidity is bought in low-income government bonds at the behest of a Federal Reserve system which conceivably could, through its influence, have aborted the panic. Current trends indicate that the welfare boys would like to put those other independent "banking" agencies—the insurance companies—into the same constricted position as the banks. With, naturally, the government in control of the assets. It did happen to American life insurance companies in Russia.

Not having a strong finger in industry these "welfare" individuals haven't been able to move in so strongly as into financial circles. But a certain demoralization and sense of insecurity have been created. Taxes on profits, parallel "competition" or domination as in the utilities and the illusion of doing something for labor by taxing the employer have been a constant source of harassment.

The farmer has been treated to a great many economic oddities in the way of crop and market control and subsidies. But the weather and supply and demand haven't yet been controlled and assured for him. Upon these his net income depends. He will doubtless be given other inducements if his political strength is united and organized.

Labor, in general being more manageable than scattered agrarian individualists, has not had the distinction between its political power as a tool in governmental manipulation compared openly with the problems of accomplishing its

aims, of security and so on, by governmental edict. How many years it will take to estimate the possible results to it of the Wagner Act and "social security" measures no one can say.

It appears that labor was achieving more before its leaders appealed to the government for interference in its behalf than it now stands to secure under any scheme involving governmental taxes, bookkeeping and policing. Much had been accomplished by employer-employee negotiation in the twenty years preceding governmental "assistance" to labor. The employer often was at fault; but whenever an organized industry learned that improvement in working conditions improved the profits, changes occurred rapidly. Here and there enlightened companies developed profit-sharing and pension systems. The advancement of conditions for railroad employees probably represented one of the largest group-improvements ever brought about by repeated discussions between railroad managers and employees through their unions. But it looks like much of the remaining good which should be accomplished has been postponed by the government's part in the welfare of labor. The present antagonisms engendered in practically all business-men throughout the country plus their uncertainties regarding tax effects and governmental regulation by other means causes them to be unwilling to initiate wage-raises, pension systems or profit sharing plans which undoubtedly offer most to employees. If they secure it through the government they may find themselves working for the government.

In summary, the idea men of the social welfare group are attempting to put on many of our neighbors the respectability and propriety of government management. But the laws of nature have generally informed us that real improvement in any situation comes from within —not from without. It is one thing to educate bankers, farmers, manufacturers, laborers and professional men to their problems and shortcomings. It is another to attempt to impose "a" or worse "the" solution on them. It is one thing to have to *submit* to governmental regulation; it is another to request of the government, by the group to be affected, permissive or enabling legislation allowing those concerned to work out a self-directed program for their own improvement.

We must inform our neighbors that we desire to continue in our studied way our attempts to improve the *personal value* of the practice of medicine. We must convince them not only of our abhorrence of *political systems* of practice but of our knowledge that subsidizing an easy contact with a physician does not improve the general health.

ACCIDENTS, PREVENTABLE OR OTHERWISE

Accidents, preventable or otherwise, constitute one of the greatest and most calamitous risks of existence.

Aside from the psychological element of personal loss, the economic deficit of the *disabling* accident ranks only slightly less than that of the casualty that is a fatality.

Industrial accidents have decreased materially through protective legislation. Unfortunately the preventable accident, according to statistics indicates material increase.

Even more than illness, accidents are one of the chief causes of physical and economic disability. Reliable statistics show that annually the population of the United States sustains *ten million disabling accidents,* a daily average of about 30,000 and because of which a consequent body of some 500,000 persons is kept from usual daily tasks by accident. Accident fatalities run about 100,000 deaths per annum.

These figures read like the casualties of war.

Another item that calls for thoughtful deliberation is the fact that low income families ($1,000 per annum or less) and those families on relief have the higher proportion of accidents. Two authorities call attention to the fact that in "relief families" *home accidents* were 43% higher than in families running in the $3,000 income class and upwards.

Of "home accidents" it is reported that 59% are occasioned by falls. Such accidents are due probably to disrepair of the buildings occupied, worn or weakened carpetings or furniture, or the inevitable inconvenient and insufficient lighting arrangements of the establishments of the more destitute.

Age too is a factor in accident susceptibility. The seven and one-half million persons of sixty-five years of age or older make up only about 6% of the population of the United States. *Yet it is in this class that fully 25% of the fatal accidents*

occur. Accident prevention in this class calls for more detailed care and attention.

The qualities of age are an increased risk. Broken bones knit more slowly if they knit at all, and the regenerative processes of the entire body are on the down grade by the time a man or woman is 65. Unfortunately to, the very nature, tradition and background of "home" creates such a feeling of security that it is there that the greatest of all accident factors—*carelessness*—thrives!

Women are more frequent victims of the "home" accident than are men, and more prone to neglect the consequences. Though the ratio of frequency of accidents in persons 65 or over is the same in both sexes—i.e.—about 6% of the entire casualty record,—yet there is something like 43% of female fatalities from accident, registered in this age group as against something like 18% for males.

The attached table, taken from a bulletin of the Metropolitan Life Insurance Company, affords interesting study.

Death Rates per 100,000 for Accidents (All Forms). By Sex and Specified Age Periods in the United States, 1934-1936

Age Period	Males	Females
All Ages	114.5	47.8
Under 15	54.6	32.2
15-44	101.3	21.7
45-64	159.3	44.3
65-69	243.9	127.1
70-74	296.5	220.3
75-79	425.7	443.1
80 and Over	842.6	1,168.9

Falls on floors—due to slipping or tripping over a rug or some other minor obstacle, or on stairs, or on the street are annually responsible for about 15,000 deaths among "old" persons in the United States.

Further analyzed this accounts for 70% of such fatalities among women dying from such causes but for only about 38% among men.

When it comes to the question of the something like 5,500 aged persons who meet death annually in motor accidents it is shown that about 66⅔% of these deaths come from pedestrians being struck by cars or vehicles. Impaired hearing as well as impaired locomotion or slow comprehension may be held responsible.

Clothing catching fire at stoves or grates or ignition from pipe ashes results annually in over a thousand deaths—about 1,100 in fact—from accidental burns among persons of 65 or over.

Illuminating gas poisoning is another major cause of "old age accident fatalities." Again is the impairment of faculties responsible.

Despite excellent work accomplished by instruction in "Safety First" the work as yet undone in this direction looms large.

There should be a decrease in home accidents and this should be achieved by simple concentrated persistent instruction.

When the committee of the American Medical Association to Study Problems of Motor Vehicle Accidents met a little over a year ago (i.e. Dec. 1938), it reported that a casualty decrease shown during 1938 was due evidently to education and traffic law enforcement. Recommendation was made at that time for a more rigerous inspection of the *qualifications for drivers* before driving licenses were issued. This included special attention to:

"1. Permanent deficiencies;

2. Transitory deficiencies;

3. Brief and often self-inflicted disabilities from which recovery is usually natural, certain, complete and prompt, such as intoxication; the effect of drugs, lack of sleep, unusual excitement or worry."

Care was urged also in the selection of official agencies for dealing with physical and mental defects as related to driving ability. City, highway and state police departments, and Drivers' License Administrators are these agencies. A higher qualification was suggested for commercial drivers than for the general public. Sensory defects were held to present one of the greatest problems since it is of course necessary to establish the point in deficiency at which the hazards are so great that such a handicapped person becomes a "driving risk."

Keeping a record of all motor accidents and traffic violations sets up a standard by which to judge the merits of a man's right to drive, or of the necessity of either revoking or suspending his driving privileges.

"Transitory deficiencies" that result from effects of medication might be guarded against by having the doctor instruct the patient *to abstain from driving* until a certain time has elapsed after the administration of any drug that might produce vertigo, drowsiness or nausea or general temporary imbalance.

"Driving while intoxicated" is now a legal crime practically all over the world. Chemical tests for intoxication are compulsory in Sweden

and Germany after traffic accidents, as well as in many other European countries, and in something like one-third of the different American commonwealths.

Let it be quoted from the findings of that A.M.A. committee, that:

"The importance of alcohol as a factor in traffic accidents has been demonstrated by the work of R. L. Holcomb in Evanston, Ill. Alcohol tests made of the breath of 1,750 drivers chosen at random on the streets of Evanston, a legally dry community, were compared with the results of alcohol tests made on the urines of 270 drivers brought to Evanston hospitals after being involved in personal injury accidents. If alcohol were not a factor in accidents, it is obvious that the percentage of drivers in each of these two groups who had been drinking would be about the same. However, it was found that 47 per cent of those involved in personal injury accidents had alcohol in their blood, while only 12 per cent of the drivers selected at random were in the drinking class.

"Assuming that the chance of having an accident when no alcohol has been consumed is represented by the number one, then the chance of having an accident has been shown to be fifty-five times greater when the average person has a concentration of alcohol in his blood of 0.15 per cent or more. (Approximation by Committee on Tests for Intoxication, National Safety Council, in its 1938 Report.)

"Holcomb's survey confirms previous observations that alcoholic intoxication contributes materially to the peak of accidents, which occurs on Saturdays and Sundays as well as the belief of many that alcoholic intoxication, rather than darkness, is the major cause of the high proportion of personal injury accidents in the hours after midnight.

"The concentration of alcohol in the blood is one of the best criteria of intoxication because blood alcohol concentrations closely parallel detrimental effects noted in carefully conducted experimental tests. Although this relationship is not mathematically exact because of slight variations resulting from inherent differences in human beings, it is sufficiently accurate for practical purposes. The relationships between concentrations of alcohol in blood, urine, saliva and breath have been shown to be sufficiently definite so that chemical tests of any of these body materials can furnish a reliable measure of the degree of alcoholic influence.

"For medicolegal purposes, the committee of the A.M.A. cited recommends the following interpretation of chemical tests for alcohol:

1. Although there is no mimimal figure which can be set at which there will be absolutely no effect from alcohol, the committee recommends that persons with a concentration of alcohol of less than 0.05 per cent by weight in blood or its equivalent in urine, saliva or breath should not be prosecuted for driving while under the influence of alcoholic liquor.

2. All persons show a definite loss of that clearness of intellect and control of themselves which they would ordinarily possess when the concentrations are above 0.15 per cent in the blood or its equivalent in other body fluids or breath and should therefore be considered as under the influence.

3. When the alcohol concentrations are between 0.05 and 0.15 per cent in the blood, a great many of the persons will be under the influence of alcohol, but the committee recommends prosecution only when the circumstances and results of physical examination give definite confirmation of such influence."

NATIONAL PHYSICIANS COMMITTEE SHOULD BE SUPPORTED

On PWA building construction work in Chicago, day laborers are paid at the rate of one dollar per hour for five eight-hour days per week. Before this laborer is allowed to work one hour he must join the International Hod Carriers Building and Common Laborers Union of America. The initiation fee is forty dollars; the dues two dollars monthly. The year's cost for the initiation and dues is sixty-four dollars.

On March 4 the Washington, D. C., Appellate Court ruled, in effect, "that the practice of medicine is a trade and not a profession." The case was remanded to the Federal District Court for trial on the charge "of criminal conspiracy to restrain trade." This constitutes merely another step in the program designed to break down the confidence of the public in organized medicine and to discredit the practicing physician.

It should be kept constantly in mind that on the basis of the actual record, American Medicine has provided a more effective and more widely distributed medical service than has ever

before been provided by any nation in the world's history.

On the representations of the agents of Justice, the original indictments against the Secretary of the AMA, the editor of *Journal of the American Medical Association* and seventeen other physicians were voted on December 20, 1938.

These indictments formed the base of the most systematic and widespread propaganda that was ever known in this country in connection with any trade or profession. Newspapers, magazines, public platforms, radios, were and are being used to tell the public (in effect) that organized medicine is officered by criminals who are trying to maintain a strangle-hold on American medical service and distribution in direct contravention of law.

After the barrage of publicity was laid down, on February 28, 1939, Senator Wagner introduced into the Congress the bill that became known as the Wagner National Health Act.

This act did not set up any new Federal bureaus or agencies. It did, however, provide for appropriations totaling $89,000,000 for different kinds of health services for 1940, $120,000,000 for 1941, $230,000,000 for 1942, and for subsequent years such sums of money as were needed. Estimates of how much might be needed under the act vary anywhere from $850,000,000 a year to as much as three billion dollars a year.

The opinion is widely held that this suit was brought, not with the expectation of proving charges or winning a lawsuit, but largely if not entirely, for the purpose of providing a propaganda base that would pave the way for the enactment of drastic if not actually revolutionary health legislation. The menace was sensed, and the enactment of legislation was vigorously opposed by physicians throughout the United States. Hearings before the Sub-Committee of Education and Labor of the Senate evidenced such an aroused public opinion that it made wholly impracticable the passage of the Wagner National Health Bill in the last Congress.

However, there has been no final settlement of the issue. The adverse propaganda continues. Unless steps are taken to thoroughly acquaint the public with the methods, the progress, the achievements of American Medicine, there is little else for it to do but believe what it is told; namely, that our medical service is inadequate and ineffective. If the public finally reaches this conclusion, revolutionary changes will result and the physician can expect to have to become subservient to the Ward Committeeman and take instructions from the Precinct Captain.

A new kind of problem is presented. It is in all likelihood the most important one that physicians have had to face. To meet the urgent need and to help solve the problem, the National Physicians' Committee was established.

This should be kept in mind constantly,—this Committee will be effective just to the extent that it is accorded the moral and financial support of the rank and file of practicing physicians. If physicians refuse or fail or neglect to volunteer their support, the effort will be ineffective. Neglect is as dangerous as failure or refusal.

If you have not done your part, you should reread the opening paragraph of this story. Possibly you will prefer to join the Hod Carriers Union—at a cost of $64.00 per year. If you prefer to help maintain the practice of medicine as a profession, send your check—as much as you can afford—today. Make it payable to Dr. N. S. Davis, III, Treasurer, and mail it to the National Physicians' Committee for the Extension of Medical Service, 700 N. Michigan Ave., Chicago, Illinois.

THE PRESIDENT'S ONE HUNDRED BED HOSPITALS

The Wagner National Hospital Act of 1940, which provides for the construction of some fifty-one hundred bed hospitals with federal funds should receive more serious consideration than the $10,000,000.00 involved might indicate.

The proposal involves the building of hospitals in areas lacking hospital facilities and financially unable to provide them. It places on such local communities full responsibility for maintenance and operation.

The hospitals contemplated by the President and by the Wagner Hospital Bill of 1940 are to cost $150,000.00 and approximately to contain $50,000.00 worth of equipment, or an average cost of $200,000.00.

All of the available data on the cost of hospital operation indicates that the annual operating cost approximates the investment in plant and equipment. There are wide variations. If all, or a large percentage of the beds are occupied by chronics, or if located in areas with equable or mild climates, the costs will be lower. However,

the actual costs on the basis of 80% occupancy range from a minimum of $3.00 to an average of $6.00. Hence, to operate a hundred bed hospital for one year requires approximately 30,000 patient days of actual occupancy and an annual cost of from $90,000 as a minimum to $180,000 average cost per year.

On the basis of the provisions of the bill it would be necessary to locate the hospital in an area that could not otherwise erect the building and yet, at the same time, be able to finance operation on a scale which would each year approximate the actual cost of construction. Obviously this is a paradox.

On the basis of the proposed legislation, the Federal Government retains title to the property and merely leases it to the local agency at a cost of $1.00 per year.

It would seem that there are but two conclusions. First, that no area can provide the two requirements and that no hospitals could be built. Second, that if one or more hospitals are built they woud require continuous subsidy or government operation.

If the first conclusion is the correct one, it would appear that if the bill were enacted with the appropriation omitted the same number of hospitals would be built.

If the second conclusion is correct, the building of such hospitals would provide a first step in a nation-wide government ownership and operation of general hospitals and the political control of the medical profession.

On the basis of these facts, the proposal is either childishly silly or really sinister. Draw your own conclusions.

DEATH COMES TO MRS. RALPH PEAIRS

Mrs. Myra Sinclair Peairs, 53, of 302 North School street, Normal, Illinois, wife of Doctor Ralph P. Peairs, councilor of the Fifth District, an early and active worker in the Woman's Auxiliary of the State Society died Tuesday, March 12, at the Mennonite hospital of heart disease. She had been il for three months.

As Miss Myra Sinclair she was born March 28, 1886, in Bismarck, N. D., a daughter of H. C. and Lutie Beggs Sinclair After being married to Dr. Peairs, June 24, 1913, in Normal, the couple moved to Milwaukee, Wis., where Dr. Peairs practiced. They were there for five years and then moved to Normal.

Three Children Survive

Surviving are the husband, two daughters, Myra A., San Luis Obispo, Calif.; Nancy, a student at Illinois Wesleyan university and a son, Richard, at home. There are also one sister, Mrs. B. L. Catron, Springfield, and one brother, U. J. Sinclair, Calipatria, Calif.

Mrs. Peairs was active in Girl Scout work, a member of Kappa Gamma sorority, Woman's University guild president for 10 years. She had been active in Normal public school PTA and was a former president. She was first president of the women's auxiliary to the McLean County Medical society, in 1927, the first society of that kind in the state.

Graduate of Wesleyan

She spent her childhood in Normal and later went with her family to San Diego, Calif., where she was graduated from high school. She went one year to Leland Stanford university in Palo Alto, Calif., and then returned to Normal, graduating in 1909 from Illinois Wesleyan university.

The following year she went to Columbia university teachers college in New York city, graduating there in 1910. In 1911 and 1912 she was on the faculty at Illinois Wesleyan.

She was a member of the First Presbyterian church of Normal.

THE FIRST CAESAREAN SECTION

The first successful Caesarean section on a living woman was not performed by a physician, but by the Swiss sow gelder, Jacob Nufer, in 1500, on his own wife. The first doctor to deliver a woman by section was an Italian surgeon, Christopher Bain (1540). On April 21, 1610, Jeremias Trautmann performed the first Caesarean operation to be historically established and described in detail on a living woman, at Wittenberg, in Germany. A live child was born, but the mother died suddenly three weeks later. This case led to a correspondence between the Cologne surgeon, Fabricius Hildanus, and his colleague, Michael Döring. French surgeons had performed this operation on several occasions during the 16th century as reported by Rousset in 1581 in a voluminous tome. Jacques Guillemeau (1550-1609), one of the most outstanding pupils of Ambroise Paré (1510-1590), performed a Caesarean operation on a living woman in the presence of the latter, but the patient died. Paré had advised against the operation, and he gave a description of the operation on the cadaver.—*Ciba Symposia.*

MEDICAL ECONOMICS

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MEDICAL ECONOMICS COLUMN FOR APRIL

The recent decision of the United States Court of Appeals for the District of Columbia, in case No. 7488, The United States of America vs. American Medical Association, a Corporation, is the headline news of the month. On March 4, 1940, the decision reversing the decision last summer in favor of the American Medical Association brought back the question of whether the practice of medicine is a trade or a profession. This was quite a surprise to the rank and file of the medical profession who both hoped and thought that the decision last summer definitely decided that the practice of medicine was a profession and accordingly not subject to the Sherman Anti-trust law, which was thought to have to do with trade. Possibly some of "those in the know" were not surprised, and were prepared for the necessary sequelae. This last decision will undoubtedly result in a further appeal by the Medical Association to the Supreme Court of the United States. How long this will take is problematical, but until that decision is made, the American Medical Association is under suspicion, not to mention any ulterior motives behind the entire affair.

The press both lay and medical has commented on the decision at length. Most of the comment has been favorable to the medical profession.

In the March 9th issue of the *Liberty Magazine* was another article unfriendly to the medical profession, entitled Doctors on the Operating Table, written by Frederick L. Collins. It is a fine example of the clever manner in which truths, half-truths and untruths are presented so that an apparently friendly article can contain portions which are distinctly unfriendly and unkind to the medical profession, to whom the writer is apparently most friendly disposed. Please take time to read this article and make your own appraisal of the type of propaganda now being used against the medical profession of America.

The Public Relations Bureau of the Medical Society of the State of New York has recently published a most excellent brochure entitled "What It Means to Be a Doctor." These can be purchased directly from the office at 2 East 103rd Street in New York, in any quantity desired. It would be well to have this brochure in the hands of every member of the Illinois State Medical Society and better still to have copies of the same available in their offices, so that they can be distributed to the laity. It would be a fine plan for County Medical Societies to purchase the first supply for their members and distribute them at the regular meeting. This is the kind of propaganda that the medical profession should encourage. It is dignified, informative, and educational.

Plans for the one hundredth anniversary issue of the ILLINOIS MEDICAL JOURNAL continue and the indications are that it will be outstanding. When and if the Editor or one of the officers of the Society request assistance from the officers of any of the Component County Societies, be sure and furnish the desired information promptly. With the assistance of county secretaries, the group of photographs of the pioneer physicians of Illinois should be of the greatest interest, particularly when added to the collection of Dr. Black of Jacksonville. Every community has some pioneer physician, whose photograph should be included in the exhibition. It is the obligation of the County Secretary to see that this work is done.

The National Hospital Act of 1940 continues to be discussed pro and con. The President of the Chicago Medical Society has analyzed this law and has provided an article to be published in this column on the same. Dr. Davis has been interested in this subject for some time and his analysis should be of interest to all of us, for it is quite generally agreed that the bill has a fine chance of passing, even though it has been accused as "It's only the Beginning." Without opposition from the medical profession, either individual or an association, there is nothing to

keep it from being passed. It will help to assuage the grief of the proponents of the Wagner Bill and in a small measure show progress in the furnishing of Medical care to the submerged third, of which we hear so much and see so little.

The residents of Douglas County in Wisconsin have not waxed enthusiastic over a plan for voluntary health insurance offered in 1938, at approximately $35.00 per family per year. Only 400 of the 30,000 residents of the county took advantage of opportunity the first six months and only an additional 75 the second six months. The doctors received 83½ per cent of their fees and the administrative deficit of $557 was made up by the Medical Society of Wisconsin. After the demand for some such a plan, the reason for the apparent lack of interest on the part of the public is difficult to explain, but the fact remains that the number of participants was much below all estimates. It will be most interesting to see whether this experience will be repeated at other points in the nation.

We must not forget to contact the candidates nominated at the coming election in April. We must know their stand in regard to the Socialization of Medicine. This can be obtained if the right men contact the candidates and it is never too early to start to get them on record. That will give all of us something to do for organized medicine.

E. S. Hamilton, M.D., Chairman.

Correspondence

HEALTH SERIOUSLY AFFECTED BY LARD SUBSTITUTION

Chicago, March 10, 1940.

To the Editors

The *Chicago Daily Tribune* of the 26th inst. publishes parts of an address made by Representative Clarence J. Brown, of Washington, D. C., relative to the army's use of substitutes replacing lard, amounting to 10,000,000 pounds, although, quoting Mr. Brown, "Today hog prices are the lowest in many years, with the farmer receiving 5 cents per pound and less, on the farm, for his hogs. He is being told that there is an oversupply of pork products. Yet the government which is being supported by the farmer's hard earned tax dollars, is purchasing and using lard substitutes in great quantities.

While the quotation is meant to call attention to the economic reason for not using synthetic and other substitutes even in a time like this, there is, for physicians a more serious reason for insisting on animal fats liberally for all, army and citizen alike, because of the effect on nutrition, efficiency in labor, prevention of disease and even mortality.

On May 28, 1938, there was printed in the *British Medical Journal,* an article by Dr. Med Johanne Christiansen of Copenhagen, a prominent physician and research worker, an article entitled "Nutrition of Denmark during the war," which I have just received. I enclose the reprint for copying or extracting authentic information on this subject, in a country about the size of Illinois, which represents the physicians' relation to the subject.

Effie L. Lobdell, M.D.

We quote from the *British Medical Journal* as follows:

NUTRITION OF DENMARK DURING THE WAR

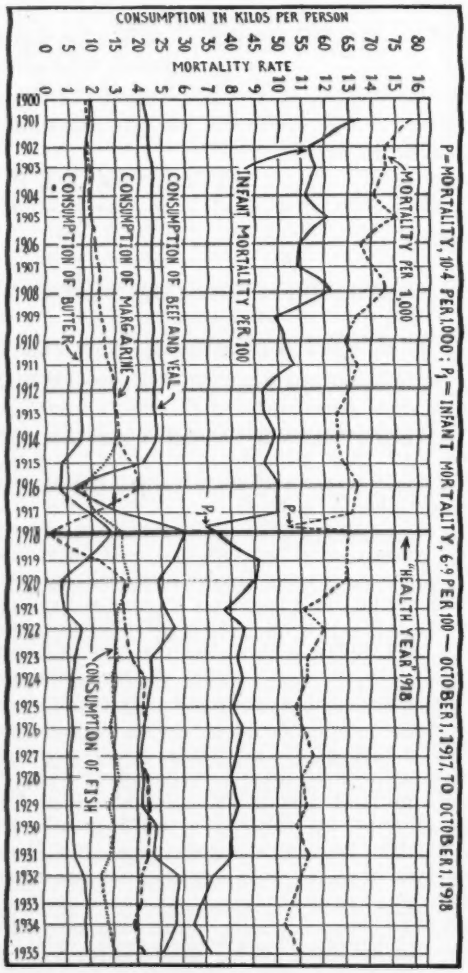
To the Editor of the British Medical Journal

Sir—May I correct any misunderstandings which may have arisen from Dr. Alfred C. Jordan's reference to the rationing of foodstuffs in Denmark in 1918 (*Journal,* April 30, p. 973). Rationing became necessary in this year because margarine—which provides too great a proportion (15 to 20 per cent) of the calories in the Danish dietary—could not be imported; consequently the consumption of this substitute foodstuff was reduced almost to zero in the autumn of 1917. It became necessary to restrict the export of butter, and a weekly ration of 250 grammes was allowed for each person. All small children were allowed 1 litre of whole milk (against Dr. Hindhede's views) and the consumption of meat and fish increased considerably (this also was against Dr. Hindhede's views). Free trade was possible in meat and fish, but potatoes were scarce, bread restricted, and the imports of fruit diminished. To make up the loss of calories previously provided by margarine it was necessary to eat more milk and meat. The only part of the usual conception of this rationing which is true is that the bread was whole-rye and whole-wheat, because the import of foreign meal was stopped. Dr. Hindhede certainly gave advice regarding the bread, but his "dictatorial powers" were simply part of a myth which ought to be exploded. The rationing was forced on us by the circumstances then existing, and the director responsible for it was Professor H. Mollgaard, who was supported by Dr. Hindhede and several other people.

The directors of this scheme were surprised to find that the results of this rationing showed the importance of animal nutrition, thus supporting the modern views of McCollum, Mellanby, and Orr. The supposed "Spartan diet" of 1918 has for too long been quoted in sup-

port of the vegetarian faddism of Hindhede. It is an established fact that the Danish people never lived better than in 1918, when they had genuine home-made —mostly animal—food without any imported substitute foodstuffs. It was especially the poor people who benefited because of the equal distribution of butter and milk (instead of margarine and skim milk). It is especially dangerous for the nutrition of poor people if this great and important experiments with the dietary of three million people is misquoted and wrongly explained, as it has been for twenty years.

For full comprehension of the accompanying chart, which has never before appeared in an English journal,


CONSUMPTION IN KILOS PER PERSON
MORTALITY RATE
CONSUMPTION OF BUTTER
CONSUMPTION OF MARGARINE
CONSUMPTION OF BEEF AND VEAL
INFANT MORTALITY PER 100
MORTALITY PER 1,000
CONSUMPTION OF FISH
"HEALTH YEAR" 1918
P=MORTALITY, 10·4 PER 1,000; P1=INFANT MORTALITY, 6·9 PER 100— OCTOBER 1, 1917, TO OCTOBER 1, 1918

Nutrition and Mortality in Denmark, 1901 to 1935.

it is necessary to remember that the decreased mortality is counted from October 1, 1937, to October 1, 1938, the full mortality of the whole year 1918 rising to 13 per thousand because of the influence epidemic which began in Denmark in October, 1918.—I am, etc.,

JOHANNE CHRISTIANSEN.

Copenhagen.

Nutrition and Mortality in Denmark, 1901 to 1935.

VETERANS' SERVICE COMMITTEE DINNER

F. O. FREDRICKSON, PRESIDING

6:00 P. M. Sharp Tuesday, May 21, 1940

PROGRAM

Call to Order

1. Presentation of Colors—Commander Peoria Post No. 2.
2. Bugle: to the Colors—Carl Steinhoff, M. D.
3. "Newer Aspects of Medical Service in War"—John Dibble, Lt. Col. M. C. U. S. A. 6 Corps Area.
4. "Americanism"—Major Leigh N. Bittinger, Depart. Commander, Dept. Illinois, American Legion, Commander Onagro Military Academy.
5. "Remarks"—Karl A. Gillig, Depart. Commander Veterans of Foreign Wars.
6. Moment of Silence.
7. Retirement of Colors.

FEDERALIZED MEDICINE IS DOOMED IN UNITED STATES

Minneapolis, Minn., March 4, 1940.

To the Editor:

As a member of the Central Committee of the National Physician's Committee for the Extension of Medical Service, you will undoubtedly be interested in the results of Modern Medicine's 1940 Physicians' Referendum. Advance page proofs are enclosed herewith.

The balloting of 20,215 U. S. physicians demonstrates conclusively that federalized medicine is doomed in the U. S. because 85% of the doctors would not co-operate with a federally controlled and administrated legislative program tending toward the drastic curtailment of the private practice of medicine. Furthermore, 88% see in such a program a menace to the public health through a deterioration in the quality of medical service available to most people in the United States; 85% are united in the support of the platform of the American Medical Association; and 88% approve of its key point, namely, local responsibility for the delivery of medical care.

It is our desire to serve the purposes of the National Physician's Committee for the Extension of Medical Service by also assuming responsibility for countering propaganda destructive to the ideals, ethics and independence of American medicine. At our own expense we are giving widespread publicity to the results of this referendum through all channels of publicity, press, radio, etc.

We believe that you may further serve the

fundamental purposes of the National Physician's Committee by doing these things:

1. Write us a letter expressing your opinion concerning the meaning of the results expressed in this physicians' referendum.

2. Give to your local newspaper an official statement, as a member of the Central Committee of the National Physician's Committee, concerning the meaning of the doctors' attitude toward federalized medicine, as expressed in this referendum.

Sincerely yours,
Modern Medicine,
A. E. Hedback, M. D., Editor.

STATE MATERNAL WELFARE LUNCHEON

The annual State Maternal Welfare Luncheon will be held at High Noon, Wednesday, May 22nd, at the Pere Marquette Hotel in Peoria. There will be a very interesting program featured by a symposium on The New Obstetrical Hospital Plan for Illinois by members of the State Maternal Welfare Committee. Also, we will have as our guest Doctor Litzenburg, a nationally known obstetrician, who will address us on The Hospital Plan of Wisconsin.

We are very anxious to have a full attendance of all the county chairmen of the State Any other physicians attending the State Meeting who wish to attend this luncheon and program may secure tickets at the door of the dining room.

T. B. Williamson M. D.,,
Chairman.
John F. Carey, M. D.,
Secretary.

OPENING FOR PHYSICIANS

At the present time, there are several vacancies on the medical staffs of the State hospitals for the insane and feeble-minded under the jurisdiction of the State Department of Public Welfare.

Physicians enter the service in the classification of junior physician. Legal residence in the State of Illinois, citizenship in the United States, graduation from a Class A medical college, as defined by the American Medical Association, and license to practice medicine in this State are required.

The salary for this position is $150 per month with full maintenance for self and family. At the end of each year of service, an automatic increase of $5.00 per month is allowed, until the maximum of $180 per month is attained. The quarters for physicians and their families have been improved considerably by the construction of new staff houses at many of the hospitals.

If no civil service examination is pending, the applicant may be appointed and will be required to take the next examination for the position of junior physician which is scheduled by the State Civil Service Commission, thus affording merit protection.

Advancement to the higher classification of senior physician, clinical director and assistant managing officer is provided through promotional examination. The salary range for senior physician is from $195 to $210 per month. For clinical director, the salary range is from $250 to $300 per month. Assistant managing officers in institutions with a population of less than 2,500 receive from $218.33 to $243.33 per month, and in institutions with more than 2,500 patients, receive from $243.33 to $268.33 per month. Maintenance for self and family is provided in all of these positions.

Opportunities for graduate training in psychiatry while employed in the State service have been provided and will be augmented when the additional wards and research facilities in the new Psychiatric Institute are made available in the near future.

Some residences in psychiatry are also available in the State hospitals for the insane. The salary is $52.50 per month with maintenance for self only.

Applicants should communicate with Mr. A. L. Bowen, Director, State Department of Public Welfare, Springfield, Illinois, for further information.

WOMAN'S AUXILIARY

County News

We are happy to welcome two newly formed auxiliaries. The new branches and their officers are:

Henry County

President.....Mrs. D. E. Meier, Kewanee, Ill.
Vice-President.....Mrs. C. P. White, Kewanee, Ill.
Secretary.....Mrs. M. G. Montgomery, Kewanee, Ill.
Treasurer.....Mrs. W. R. Young, Genesco, Ill.
Historian.....Mrs. F. J. Stewart, Kewanee, Ill.

Peoria County ....

President.....Mrs. O. E. Barbour, Peoria, Ill.
Vice-President.....Mrs. H. F. Diller, Peoria, Ill.
Secretary.....Mrs. Fred Stahmann, Peoria, Ill.
Corresponding Secretary..Mrs. E. Seabury, Peoria, Ill.
Treasurer.....Mrs. L. A. Burhans, Peoria, Ill.
Historian.....Mrs. Perry Goodwin, Peoria, Ill.

Madison County

Because of illness Mrs. C. W. Emons, president of the newly formed Auxiliary, has had to resign. Mrs. E. W. Wilson, Highland, Ill., is now the president and Mrs. G. E. Halyama is first vice president.

Vermilion County

A dinner preceded the installation of newly elected officers at the Grier-Lincoln Hotel, Danville, Ill., Tuesday March 5, with 24 members present. The new officers are: President Mrs. Harlan English; first vice-president, Mrs. J. C. Moore, Hoopston; second

vice-president, Mrs. D. C. Good; third vice-president, Mrs. H. F. Hooker; recording secretary, Mrs. V. L. Murphy, Georgetown; treasurer, Mrs. Bert Moore; corresponding secretary, Mrs. H. F. Dice, Ridgefarm.

Cook County

The Woman's Auxiliary to the Chicago Medical Society held their annual membership luncheon Wednesday, March 6. Mrs. Chas. Segal, president, welcomed the prospective members who were guests of the auxiliary. Twenty-two new members were reported making a total of 35 to date. Three branches reported *100 per cent. paid up memberships; namely* Calumet, North Side and South Chicago. Mrs. Jesse Gerstly, a member of our *Jackson Park Branch, gave a most interesting* and humorous talk on "Recent Escape Literature."

Cook-Englewood Branch

Englewood held its regular monthly meeting March 8 at the nurses' home, 60th and Green streets. A dessert luncheon preceded the business meeting called by the president, Mrs. J. McGuiggan. Dr. A. M. Simons spoke on Medical Economics and the National *Health program.* Mrs. Arthur Edison, legislative chairman, discussed the subject from the viewpoint of the *Woman's Auxiliary.*

Sangamon County

Many guests were present at the annual Laity Day program presented by the Woman's Auxiliary of Sangamon County, February 12. Mrs. D. M. Sirca, president, opened the meeting with a welcome to members and guests. Mrs. W. J. Morginson, program chairman, and Mrs. D. H. Trumpe, co-chairman, presented the following program: Mr. B. K. Richardson, chief of the state division of public health instruction, commented on motion pictures related to tuberculosis, diet and heredity. Miss D. Southwick, public school nurse, outlined activities and progress of school health service.

Mrs. C. W. Stuart,
Publicity Chairman.

IT WON'T BE LONG NOW before the Woman's Auxiliary to the American Medical Association will be convening at the Hotel Pennsylvania, New York City, for their 18th Annual Convention to be held June 10 to 14, 1940. IS YOUR RESERVATION IN? We are sure you will want to stay at the headquarters Hotel Pennsylvania. In order to get a reservation, mail your request today to Dr. Peter Irving, Housing Bureau, Room 1036, 233 Broadway, New York City.

CONVENTION PUBLICITY BULLETIN No. 3.

Almuth E. Otten,
Mrs. Harry Otten,
Councilor, District 5.

THE THIRTEENTH ANNUAL CONVENTION OF THE WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

Peoria, Illinois
May 21-22, 1940

Mrs. Charles Crain Winning, Presiding

TUESDAY, MAY 21, 1940

11:00 A. M.—"School of Instruction on Auxiliary Activities," Jefferson Hotel. Mrs. Geo. Walbright, presiding; Mrs. Harry Otten; co-chairman.

2:00 P. M.—Opening Business Session, Ballroom, Jefferson Hotel. Credential and Registartiin Report—Mrs. M. A. Nix.
Convention Announcements—Mrs. Milo Easton.
Roll Call.
Minutes.
Treasurer's Report.
Auditor's Report.
Annual Report of Officers.
Annual Report of Councilors.
Adjournment until 9:30 A. M., May 22nd.

WEDNESDAY, MAY 22, 1940

9:30 A. M.—Ballroom, Jefferson Hotel.
Memorial Services conducted by Mrs. O. E. Barbour.
Roll Call.
Minutes of Tuesday, May, 21, 1940.
Credential and Registration Report—Mrs. M. A. Nix.
Convention Announcements—Mrs. Milo Easton.
Annual Report of Chairman of Standing Committees.
Annual Report of County Presidents.
Reports of Special Committees.
Report of Resolution Committee—Mrs. Jos. M. Knochel.
Final Report of Credential & Reg. Com.—Mrs. M. A. Nix.
Report of Nominating Committee—Mrs. Henry Hurd, Chairman.
Election of Officers.
Installation of Officers.
Response—Mrs. H. J. Dooley.
Presentation of President's Pin—Mrs. Lucius Cole.
Adjournment.

3:00 P. M.—Post Convention Board Meeting, Jefferson Hotel.
Mrs. H. J. Dooley, presiding.

WOMAN'S AUXILIARY

Important Notice

The Woman's Auxiliary is sponsoring an exhibit of the equipment used by the early Illinois physician as a part of the Hall of Health in Peoria during the Annual Meeting.

Mrs. E. W. Burroughs, Ridgway, Illinois is Chairman and requests that any one having material suitable for this special feature, communicate with her at once.

Special cases will be used in which to display these instruments, saddle bags, etc.

ATTENTION AUXILIARY MEMBERS

The doctors are building an exhibit on "The Pioneer Doctors of Illinois" to be shown at Peoria during the Illinois State Medical Convention in May. They have invited the Woman's Auxiliary to collect "Early Equipment" used by the doctors of Illinois which shall be placed on display with their exhibit.

If you have or can obtain any of these materials please communicate with Mrs. E. W. Burroughs, Ridgway, Ill., or send them to her by registered mail. Items may also be taken to the exhibit or sent by some member from your district.

Your property will be well protected as the cases which are to enclose them will be locked during the showing. We will deeply appreciate your interest in this display and your help in making the exhibit a success.

Mrs. E. W. Burroughs,
Chairman of Exhibits.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY—EXAMINATIONS

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted at Atlantic City, N. J., from Friday, June 7, through Monday, June 10, 1940, prior to the opening of the annual meeting of the American Medical Association in New York City on Wednesday, June 12, 1940. Formal notice of the exact time and place of the examination will be forwarded to each candidate several weeks in advance of the examination dates. Group A candidates will be examined on June 7 and 8, and Group B candidates on June 9 and 10.

Candidates for *reexamination* in Part II must make written application to the Secretary's Office *before April* 15.

The annual dinner of the Board will be held in New York City on Wednesday evening, June 12, 1940, at the Hotel McAlpin. Diplomates certified at the preceding days' examination will be introduced personally, and there will be several speakers. All Diplomates of the Board, and others interested in the work of the Board, are cordially invited to attend this dinner.

Tickets at $3.50 each may be obtained from Dr. Joseph L. Baer, chairman, 104 S. Michigan Avenue, Chicago, Illinois, or at the registration desk during the examinations.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

ARMY EXPERIENCE FOR PHYSICIANS

An interesting medical corollary to the augmentation of the United States Army during 1940 and 1941 and to the planned large scale Army maneuvers during the spring and summer of 1940 is the broad medico-military experience which a great number of civilian physicians will receive. Medical Reserve officers are being used to augment the entire Army Medical Service, which includes everything from small unit installations to large Station Hospitals, General Hospitals, and hospitals designed primarily for the treatment of specific types of cases.

Physicians under 35 years of age who are desirous of obtaining extended active duty with the Army but who do not hold Reserve commissions are being offered appointments in the Medical Corps Reserve in the grade of 1st Lieutenant, in order to permit them to be placed on such duty. Captains and Lieutenants are at present being offered excellent assignments throughout the continental United States, and it is hoped that authority will be granted to actually permit some officers to go to Hawaii and Panama. In addition to having a new and very busy experience in the practice of medicine, the average officer finds the pay and allowance attractive. The pay and allowances for a married 1st Lieutenant amount to approximately $263.00 a month; for a single 1st Lieutenant to approximately $225.00 a month; for a married Captain to approximately $316.00 a month; and for a single Captain to approximately $278.00 a month. In most cases the above pay and allowances would apply inasmuch as Government quarters are not usually available for officers on extended active duty. In the few instances where Government quarters are available, the amounts would be $40, $60, $70, and $80 less per month respectively. In addition, the officer is reimbursed for mileage traveled from his home to his station, and upon completion of his tour of duty is reimbursed similarly for the travel to his home.

Application for one year of active duty, or for appointment in the Medical Corps Reserve with a view to obtaining one year of active duty with the Army, should be requested at once by a letter addressed to the Commanding General of the Corps Area* wherein the physician permanently resides. In addition, the application should contain concise information regarding permanent address, temporary address, number of dependents, earliest date available for active duty, and that internship has been (or will be) completed; and it should be accompanied by a report of physical examination recorded on the Army Form W.D. A.G.O. 63, which may be obtained from any Army station. From the group of Reserve officers placed on extended active duty since August, 1939, over 25 per cent. of those within the age requirements of 32 years of age

or less for commission in the Regular Army Medical Corps found military service sufficiently to their liking to cause them to take entrance examinations for the Regular Army.

*First Corps Area (Maine, N. H., Vt., Mass., R. I., Conn.) Army Base, Boston, 9, Mass.

Second Corps Area (New York, New Jersey, Delaware) Governors Island, New York.

Third Corps Area (Pa., Md., Va., D. C.) Post Office & Court House, Baltimore, Md.

Fourth Corps Area (N. C., S. C., Ga., Fla., Ala., Tenn., Miss., La.) Post Office Bldg., Atlanta, Ga.

Fifth Corps Area (Ohio, W. Va., Ind., Ky.) Fort Hayes, Columbus, Ohio.

Sixth Corps Area (Ill., Mich., Wis.) Post Office Bldg., Chicago, Ill.

Seventh Corps Area (Mo., Kan., Ark., Iowa, Neb., Minn., N. D., S. D.) New Federal Bldg, Omaha, Neb.

Eighth Corps Area (Tex., Okla., Colo., N. M., Ariz.) Fort Sam Houston, San Antonio, Tex.

Ninth Corps Area (Wash., Ore., Idaho, Mont., Wyo., Utah, Nev., Cal.) Presidio of San Francisco, San Francisco, Cal.

DEPARTMENT OF PUBLIC HEALTH

March 15, 1940

Illinois Medical Society,
30 North Michigan,
Chicago, Illinois.
Dear Sir:

Below is a list of laboratories just approved for pneumonia typing.

On the attached sheet is a list of laboratories newly approved for pre-marital tests. These are for publication in your journal.

Approved for Pneumonia Typing

Oak Forest Infirmary Laboratory, 159th and Cicero Avenue, Oak Forest.

St. George's Hospital Laboratory, 449 Winneconna Parkway, Chicago.

St. Margaret's Hospital Laboratory, 600 First Street, Spring Valley.

University Hospital Laboratory, 432 S. Wolcott Street, Chicago.

Yours very truly,
H. E. McDaniels, Ph.D.,
Co-ordinating Bacteriologist.

HEMcD:rmb
Attach.

LABORATORIES APPROVED FOR PRE-MARITAL TESTS

March 15, 1940

Columbus Laboratories, 31 N. State Street, Chicago.

Culver & Baker Laboratory, 7 W. Madison, Chicago (Gc only).

DeKalb Public Hospital, 719 S. First Street, DeKalb (Gc only).

Henrotin Hospital Laboratory, 939 N. LaSalle Street, Chicago.

The Illyes Laboratory, Gee Building, Lawrenceville (Gc only).

Alexander J. Link, X-ray Laboratory, 7 S. County Street, Waukegan.

McLeansboro Hospital Laboratory, McLeansboro (Gc only).

Morris Hospital, 150 W. High Street, Morris. (Gc only).

The Olney Sanitarium, Inc., 606-610 E. Main Street, Olney.

Post Graduate Hospital Laboratory, 2400 S. Dearborn Street, Chicago (Gc only).

St. Francis Hospital, 530-616 N. Glen Oak Avenue, Peoria.

Laboratory Suite 930, 104 S. Michigan Avenue, Chicago.

U. S. Naval Hospital Laboratory, U. S. Naval Training Station, Great Lakes.

University Hospital Laboratory, 432 S. Wolcott Street, Chicago (Gc only).

SECRET DISSECTIONS DURING THE MIDDLE AGES

Since the dissection of human cadavers was prohibited at times during the Middle Ages, it was necessary for students to steal corpses in order to study anatomy. The great anatomist, Vesalius, for example, obtained material for his anatomical studies by taking the corpses from the gallows of Louvain.

Felix Platter (1536-1614), professor of medicine, and municipal and hospital physician at Bâle, relates in his memoirs how he and his fellow students, armed to the teeth, dug up corpses at night in the cemetery at St. Denis. Wrapping themselves in their night clothes, they crept through a hole in the closed city gate. The cadavers were brought to the rooms of one of the students and dissected there. Because of the dreadful odor they poured vinegar on themselves. When they again approached the cemetery at night the watchman shot at them with cross-bows.—*Ciba Symposia.*

A seven year survey of the incidence of tuberculosis in New York City conducted by the City Health Department indicates that about 2.5% of the population is afflicted with the disease and that about 85% of those so afflicted are unaware of the fact. The highest percentage of tuberculosis—5.3%—is to be found among the city's homeless men and the lowest among the college students—0.2%.—New York City Department of Health, 1940.

The routine use of the tuberculin test in prenatal care can be easily used in clinics and private practice for discovery of active tuberculosis. Unsuspected active tuberculosis occurred in 1.7% of those tested in one county in California, where the early institution of collapse therapy prevented extension of the pulmonary disease.—Ianne, Charles, *Amer. Rev. of Tuber.*, Dec., 1939.

Program

of the

One-Hundreth Annual Meeting

ILLINOIS STATE MEDICAL SOCIETY

Peoria, Illinois, May 21, 22, and 23, 1940

1940 Official Program

COUNCILOR DISTRICTS

1st District—E. H. Weld, Rockford, Councilor.
Boone, Carroll, DeKalb, Jo Daviess, Kane, Lake, McHenry, Ogle, Stephenson, Winnebago.

2nd District—Edgar C. Cook, Mendota, Councilor.
Bureau, LaSalle, Lee, Livingston, Marshall, Putnam, Whiteside, Woodford.

3rd District—John S. Nagel, Percy E. Hopkins and L. E. Day, Councilors.
Cook County only.

4th District—E. P. Coleman, Canton, Councilor.
Fulton, Hancock, Henderson, Henry, Knox, McDonough, Mercer, Peoria, Rock Island, Schuyler, Stark, Warren.

5th District—Ralph P. Peairs, Normal, Councilor.
DeWitt, Logan, McLean, Mason, Menard, Montgomery, Sangamon, Tazewell.

6th District—Thomas B. Knox, Quincy, Councilor.
Adams, Brown, Calhoun, Cass, Greene, Jersey, Macoupin, Madison, Morgan, Pike, Scott.

7th District—I. H. Neece Decatur, Councilor.
Bond, Clay, Clinton, Christian, Effingham, Fayette, Macon, Marion, Moultrie, Piatt, Shelby.

8th District—C. E. Wilkinson, Danville Councilor.
Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Edgar, Jasper, Lawrence, Richland, Vermilion.

9th District—Andy Hall, Mt. Vernon, Councilor.
Edwards, Franklin, Gallatin, Hamilton, Hardin, Jefferson, Johnson, Massac, Pope, Saline, Wabash, Wayne, White, Williamson.

10th District—J. S. Templeton, Pinckneyville, Councilor.
Alexander, Jackson, Monroe, Perry, Pulaski, Randolph, St. Clair, Union, Washington.

11th District—E. S. Hamilton, Kankakee, Councilor.
DuPage, Ford, Grundy, Iroquois, Kankakee, Kendall, Will.

THE ONE HUNDREDTH ANNIVERSARY MEETING

The Centennial meeting of the Illinois State Medical Society will be held in Peoria on May 21, 22, 23, 1940. The preliminary program appears in this issue of the ILLINOIS MEDICAL JOURNAL, and the official program will appear in the May issue, and will carry all necessary announcements.

The present membership of the Illinois State Medical Society is approximately 8,000, which is the maximum membership to date. Each member of the Society should be interested in the 1940 Centennial Meeting, and do everything possible to make it the outstanding of all meetings during the one-hundred years of medical progress.

A "Century of Progress in Medicine" will be featured throughout the annual meeting, and a number of special features have been scheduled which are materially different from those of previous years. Contrary to the usual arrangement in developing the scientific program, there will be a number of invited guests, most of whom will appear at the joint sessions of all sections.

Although each of the seven scientific sections and several special groups will hold their individual meetings, two morning and one evening session will be devoted to general sessions which will be attended by members from each section. The annual stag entertainment has been aban-

doned, and, in its place, on Tuesday evening there will be a general meeting of all sections with a program which will be of interest to all physicians. Similar arrangements have been made for Wednesday and Thursday mornings so that the individual section meetings will be held on Tuesday and Wednesday afternoons only.

Registration and Information headquarters will be in the new Shrine Mosque and in this same building, most of the section meetings will be held, and the technical and scientific exhibits likewise displayed. It will be necessary to have some special meetings in the Pere Marquette Hotel, and most likely some scientific exhibits will be presented in this hotel.

The Hall of Health will be open from Tuesday noon, May 21, to Saturday night, May 25, and will be housed in the large Peoria Armory. Here dozens of fine health exhibits will be on display for the public at large, and there will be no admission charge. The Committees in charge of the Hall of Health have procured the aid of a number of cooperating organizations interested in the various phases of health, and many outstanding exhibits have been procured for the benefit of the public.

The Secretaries' Conference will be held as a dinner meeting on Tuesday evening and at the same time, the annual Veteran's Dinner meeting will be held. Several section banquets will be scheduled for Tuesday evening, and complete information concerning these functions will be announced in the May ILLINOIS MEDICAL JOURNAL. Several Alumni Luncheons will be scheduled for Wednesday noon, and complete information concerning them, will appear in the official program.

The President's Dinner, as usual, will be held on Wednesday evening in the Ball Room of the Pere Marquette Hotel.

The Woman's Auxiliary to the Illinois State Medical Society has arranged their usual program, and in addition to these functions, a complete schedule of entertainment for all visiting ladies has been arranged by the Peoria Committees.

Complete information concerning the meeting will appear in the official program which will be published in the May ILLINOIS MEDICAL JOURNAL, and it is hoped that the Centennial meeting will be attended by the largest number of physicians which have ever attended an annual meeting.

MEETINGS OF THE HOUSE OF DELEGATES

TUESDAY AFTERNOON, MAY 21, 1940

3:00—First meeting of the House of Delegates called to order by the President, James H. Hutton, for Reports of Officers, Councilors, Committees, Appointment of Reference Committees, Introduction of Resolutions, and for the transaction of other business which may come before the House.

THURSDAY MORNING, MAY 23, 1940

9:00—Second meeting of the House of Delegates called to order by the President for the election of Officers, Councilors, Committees, Delegates and Alternates to the American Medical Association, Reports of Reference Committees and action on same, Action on Resolutions, and for the transaction of other business to come before the House.

GENERAL SESSIONS

OPENING MEETING

TUESDAY AFTERNOON, MAY 21, 1940

1:00—Meeting officially opened by President, James H. Hutton, Chicago.

Invocation by

Address of Welcome by Mayor of Peoria.

Address of Welcome by President of Peoria County Medical Society, O. E. Barbour, Peoria.

Report of Chairman, Committee on Arrangements, Arthur Sprenger, Peoria.

WEDNESDAY MORNING, MAY 22, 1940

10:00—Oration in Medicine—"The Role of the Kidney in Cardiorenal-Vascular Disease." Leonard G. Rowntree, Philadelphia, Penn.

10:40—Oration in Surgery—"Thyroid Disease: Its Diagnosis and Management." Frank Lahey, Boston, Mass.

WEDNESDAY AFTERNOON, MAY 22, 1940

1:30—President's Address—James H. Hutton, Chicago, President Illinois State Medical Society.

THURSDAY MORNING, MAY 23, 1940

Induction of the President-elect.

Immediately before the closing of the meeting of the House of Delegates, the President-elect, J. S. Templeton, Pinckneyville, will be inducted into the office of President of the Illinois State Medical Society by the retiring President, James H. Hutton of Chicago.

All members and guests at the meeting may be present at this interesting function.

JOINT SESSIONS

TUESDAY EVENING, MAY 21, 1940

Shrine Temple

Meeting of all Sections

8:00—"The Operative Treatment of Carcinoma of the Esophagus." Dallas B. Phemister, Professor and Chairman of the Department of Surgery, University of Chicago, Chicago.

8:30—"Recent Advances in Gynecologic Endocrinology." J. P. Greenhill, Professor of Obstetrics and Gynecology, Loyola University School of Medicine. Professor of Gynecology, Cook County Graduate School of Medicine, Chicago.

9:00—"The Nature of Obesity." L. H. Newburgh, Professor of Clinical Investigation, Department of Medicine, University of Michigan Medical School, Ann Arbor, Michigan.

9:30—"Choice and Dosage of Chemotherapeutic Agents for Bacterial Infections." Henry L. Barnett, Research Fellow in Pediatrics, Washington University School of Medicine, St. Louis, Missouri.

WEDNESDAY MORNING, MAY 22, 1940

9:00—"Selection of Cases for Splenectomy." Russell L. Haden, Chief of the Medical Service, Cleveland Clinic, Cleveland, Ohio.

9:30—"Diagnosis and Treatment of Common Deficiency Diseases in the Adult." Thomas D. Spies, Associate Professor of Medicine, University of Cincinnati, College of Medicine, Cincinnati, Ohio.

10:00—Oration in Medicine—"The Role of the Kidney in Cardiorenal-Vascular Disease." Leonard G. Rowntree, Philadelphia, Penn.

10:40—Oration in Surgery—"Thyroid Disease: Its Diagnosis and Management." Frank Lahey, Boston, Mass.

THURSDAY MORNING, MAY 23, 1940

9:00—"Cholecystography: With Special Reference to the Diagnostic Value of the Emptying Time." Adolph Hartung, Professor of Roentgenology, University of Illinois College of Medicine, Chicago.

9:30—"Pneumnia: Its Diagnosis and Treatment." W. B. Sutliff, Assistant Director Pneumonia Control Division, Department of Health, New York City, N. Y.

10:00—"Indications and Results of Subtotal Resection of the Pancreas for Hypogloycemin." Vernon C. David, Chairman of the Surgical Department, Rush Medical College and Presbyterian Hospital, Chicago.

10:30—"Visual Field Changes." C. W. Rucker, Assistant Professor of Ophthalmology, University of Minnesota Graduate School of Medicine, Associate in Opthalmology Mayo Clinic, Rochester, Minn.

SECTION PROGRAMS

SECTION ON MEDICINE

Edgar M. Stevenson.....Chairman
Willard O. Thompson.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

"Collapse Theory in Pulmonary Tuberculosis." Jerome R. Head, Chicago.

"Diagnosis and Management of Early Tuberculosis." Robinson Bosworth, East St. Louis.

"Pregnancy and Tuberculosis." Fred M. F. Meixner, Peoria.

"The Insulins in the Management of Diabetes." Thomas D. Masters, Springfield.

"Applications of Vitamin B_1 to Neuropsychiatry." F. G. Norbury, Jacksonville.

"Endocrine Studies of Patients After Subtotal Hypophysectomy." Paul Starr, Chicago, and Loyal Davis, Chicago.

"The Treatment of Acute Glomerulonephritis." Harold C. Lueth, Robert W. Keeton, and Mr. Harold Hailman, Chicago.

"Laboratory Aids in the Diagnosis of Coma." Mr. L. Gerber, Peoria.

Discussion only on receipt of properly executed blanks.

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections

(For complete program and abstracts of papers, see Joint Sessions.)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections

(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

Chairman's Address—E. M. Stevenson, Bloomington.

"The Specific Treatment of Anemia." Russell L. Haden, Cleveland, Ohio.

"The Maintenance Treatment of Pernicious Anemia with Parenteral Liver Extract." Howard L. Alt, Chicago, and Richard H. Young, Evanston.

"The Clinical Application of Vitamin K." Hugh R. Butt, Rochester, Minnesota.

"Vitamin K." Raymond W. McNealy, Chicago.

"Contribution of the Laboratory to the Treatment of Hemorrhage." Armand J. Quick, Milwaukee, Wisconsin.

"The Prognosis in Juvenile Rheumatic Fever." Stanley Gibson, Chicago.

Discussion only on receipt of properly executed blanks.

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections
(For complete program and abstracts of papers, see Joint Sessions)

SECTION ON SURGERY

Frederick H. Christopher.....Chairman
Charles L. Patton.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

Joint Session with Central States Society of Industrial Medicine and Surgery

"Wound Healing." Michael Mason, Chicago.
Discussion opened by Hilger P. Jenkins, Chicago.
"Treatment of Infected Wounds." David J. Lewis, Springfield.
Discussion opened by
"Postoperative Thrombosis and Embolism." Geza de Takats, Chicago.
Discussion opened by
"Treatment of Compound Fractures." W. R. Cubbins, Chicago.
Discussion opened by
"Treatment of Burns." Chester R. Zeiss, Chicago.
Discussion opened by

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections
(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections
(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

"Care of Feet in Normal Children." Harold Sofield, Oak Park.
Discussion opened by
"Cholecystectomy; Technique and Postoperative Treatment." Illustrated with Motion Pictures. Ralph B. Bettman, Chicago.
Discussion opened by
"Cholecystitis and Cholelithiasis in Children." R. A. Tearnan, Decatur.
Discussion opened by
"Transurethral Approach to the Diagnosis and Treatment of Infections of the Seminal Vesicles." Robert H. Herbst and James W. Merricks, Chicago.
Discussion opened by
"Prostigmin in Peripheral Vascular Disease." Samuel Perlow, Chicago.
Discussion opened by

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections
(For complete program and abstracts of papers, see Joint Sessions)

SECTION ON EYE, EAR, NOSE AND THROAT

Frank W. Brodrick.....Chairman
Thomas D. Allen.....Secretary

TUESDAY MORNING, MAY 21, 1940

"The Operative Treatment of Deafness." George E. Shambaugh, Jr., Chicago.
Discussion open by Robert Henner, Chicago.
"Early Glaucoma." Virgil Wescott, Chicago.
Discussion opened by W. A. McNichols, Dixon.
"Some Psychological Effects of Deafness in Children." George L. Drennan, Jacksonville.
Discussion opened by Bert I. Beverly, Chicago.
"Diagnosis and Treatment of Sinusitis by Proetz' Method." H. L. Ford, Champaign.
Discussion opened by George Woodruff, Joliet.
"The Relation of Meckel's Ganglion to Accommodation and Intraocular Tension." W. H. Luedde, St. Louis.
Business Meeting.

TUESDAY AFTERNOON, MAY 21, 1940

INSTRUCTION COURSES

OPHTHALMOLOGY.

1. Neuro-ophthalmology. Max Jacobson, Chicago.
2. Dry Clinic. Sanford Gifford, Chicago.

OTOLARYNGOLOGY.

1. Irrigation of Frontal and Maxillary Sinuses. O. E. Van Alyea, Chicago.
2. Dry Clinic.

TUESDAY EVENING, MAY 21, 1940

6:30—Annual Banquet of the Section.
"Ocular Hemorrhages in Kodachrome." Roy O. Riser, Park Ridge.

Meeting of all Sections.
(For complete program and abstracts of papers, see Joint Sessions)

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections.
(For complete program and abstracts of papers, See Joint Sessions)

WEDNESDAY AFTERNOON, MAY 22, 1940

Business Meeting. (Election)
Chairman's Address—F. W. Brodrick, Sterling.
"Evaluation of Accommodation and Convergence." Philip Halper, Chicago.

Discussion opened by Earle B. Fowler, Chicago.

"When Hearing Aids Should Be Used." A. A. Hayden, Chicago.

Discussion opened by E. W. Hagens, Chicago.

"Splenic Extract in Glaucoma." Michael Goldenburg, Chicago.

Discussion opened by F. Fenger, Clinical Research Dept., Armour & Company, Chicago. (By invitation.)

"Otolaryngology and the Weather." Noah D. Fabricant, Chicago.

Discussion opened by Max Berg, Chicago.

THURSDAY MORNING, MAY 23, 1940

SULPHUR SYMPOSIUM

Chemistry. Frank T. Maher, University of Illinois. (By invitation.)

Therapeutics. E. M. K. Geiling, University of Chicago. (By invitation.)

Specific Application to Otolaryngology. Glenn Greenwood, Evanston.

Specific Application to Ophthalmology. Harry Woodruff, Joliet.

SECTION ON PUBLIC HEALTH AND HYGIENE

John J. McShane.....Chairman
N. O. Gunderson.....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

SYMPOSIUM ON SYPHILIS

"The Kahn Verification Test for Syphilis." H. J. Shaughnessy, Ph. D., Springfield.

Discussion opened by

"The Continuous Alternating Scheme of Treatment in the Control of Acquired Syphilis." R. A. Vonderlehr, Washington, D. C.

Discussion opened by G. G. Taylor, Chicago.

"Diagnosis and Treatment of Syphilis in the Infant and Teen Age." F. E. Senear, Chicago.

Discussion opened by H. J. Burstein, Decatur.

"Criteria for Discontinuing Syphilitic Treatment." S. W. Becker, Chicago.

Discussion opened by H. M. Soloway, Chicago.

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY AFTERNOON, MAY 22, 1940

"Prevention of Contact Infection in Children." Norman T. Welford, LaGrange.

Discussion opened by E. T. McEnery, Chicago.

"The Organization and Functions of the District Units of the State Department of Public Health." A. C. Baxter, Springfield.

Discussion opened by Walter C. Earle, Champaign.

"The Control of Tuberculosis." H. V. Hullerman, Mt. Sterling.

Discussion opened by W. P. Shahan, Springfield.

"Industrial Hygiene in a Public Health Program." M. H. Kronenberg, Chicago.

Discussion opened by A. E. Russell, Washington, D. C.

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

SECTION ON RADIOLOGY

Warren W. Furey .....Chairman
Harry W. Ackermann .....Secretary

TUESDAY AFTERNOON, MAY 21, 1940

"Unusual Chest Conditions in Children." Arthur Parmelee and Fay Squire, Oak Park.

"A Few Unusual Anomalies of the Urinary Tract." J. Paul Bennett, Chicago.

Discussion opened by M. J. Hubeny, Chicago.

"The Importance of Growth Arrest Lines in Radiological Diagnosis and Prognosis." John A. Siegling, Urbana.

Discussion opened by Cesare Gianturco, Urbana.

"Gynecography." Ralph A. Reis and Robert A. Arens, Chicago.

Discussion opened by Robert A. Arens, Chicago; and Fred Decker, Peoria.

"X-Ray Therapy in Pneumonia." Fred Decker, Peoria.

Discussion opened by E. E. Barth, Chicago.

"The High Spots in Bronchiectasis." Perry B. Goodwin, Peoria.

Discussion opened by C. D. Sneller, Peoria.

Case Report—"Carcinoma of the Bladder with Roentgen films of the lesions before and after extensive Deep Radiation Therapy."

George M. Landau, Chicago.

Case Report—"An Interesting and Unusual Gastrointestinal Case with Three Separate and Distinct Lesions." Harry B. Magee, Peoria.

TUESDAY EVENING, MAY 21, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

WEDNESDAY MORNING, MAY 22, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

THURSDAY MORNING, MAY 23, 1940

Meeting of all Sections.

(For complete program and abstracts of papers, See Joint Sessions).

SECTION ON OBSTETRICS AND GYNECOLOGY

W. A. Malcolm.....Chairman
Herbert E. Schmitz.....Secretary

"Recent Advances in Gynecologic Endocrinology." J. P. Greenhill, Chicago.

"Organization of Obstetrical Work in Rural Hospitals." Jennings Litzenberg, Minneapolis, Minn.

Discussion opened by Milton E. Bitter, Quincy; O. H. Crist, Danville; W. M. Cooley, Peoria; and R. R. Loar, Bloomington.

(Each discussant allowed ten minutes).

"Toxemia of Pregnancies in the Galesburg Cottage Hospital." Edwin N. Nash, Galesburg.

"Toxemia of Pregnancies at the Cook County Hospital." Chester C. Doherty, Chicago.

"Lactation and Involution." R. R. Loar, Bloomington.

"The Use of Seconal as an Analgesic Agent During Labor." William G. Cummings, Evanston.

SECTION ON PEDIATRICS

H. William Elghammer.....Chairman
Bert I. Beverly.....Secretary

WEDNESDAY AFTERNOON, MAY 22, 1940

"Physiological Changes Incident to Puberty." Frederic T. Jung, Assistant Professor of Physiology, Northwestern University, Chicago.

"Menstrual Disorders During the Adolescent Period." Ralph E. Campbell, Associate Professor Obstetrics and Gynecology, University of Wisconsin, Madison, Wisconsin.

"Obesity in Childhood and Adolescence." L. H. Newburgh, Professor of Medicine, University of Michigan, Ann Arbor, Michigan.

"Educational Problems of Adolescence." Ernest O. Nelby, Ph.D., Dean, School of Education, Northwestern University, Chicago.

SECRETARIES' CONFERENCE

A. R. Brandenberger, Chairman.....Danville
A. R. Bogue, Vice-Chairman.....Rochelle
Carl E. Clark, Secretary.....Sycamore

TUESDAY EVENING, MAY 21, 1940

6:00—Dinner Meeting.

"Post Graduate Services for County Medical Societies." Robert S. Berghoff, Chairman, Scientific Service Committee, Chicago.

"How Post Graduate Services for County Medical Societies Can Be Improved." Harold M. Camp, Secretary, Illinois State Medical Society, Monmouth.

"Relationship of the Secretary's Office to the Educational Committee." Charles P. Blair, Member Educational Committee, and Secretary, Warren County Medical Society, Monmouth.

"Participation of Local County Society Members in all Programs of the County." Roswell T. Pettit, Secretary, LaSalle County Medical Society, Ottawa.

Round Table Discussion of Problems of County Secretaries.

H. Prather Saunders, Secretary, Chicago Medical Society, Chicago.

C. P. Holoffe, Secretary, Franklin County Medical Society, West Frankfort.

A. R. Brandenberger, Secretary, Vermilion County Medical Society, Danville.

William R. Marshall, Secretary, DeWitt County Medical Society, Clinton.

PHYSICIANS' ASSOCIATION DEPARTMENT OF PUBLIC WELFARE STATE OF ILLINOIS

George Perkins.....Acting President
J. W. Klapman.....Secretary-Treasurer

TUESDAY MORNING, MAY 21, 1940

"Pick's Disease." D. Levitin, Chicago.

"Juvenile Huntington's Chorea." Eugene Falstein, Theodore F. Stone, Chicago.

"Comparative Effects of Coma Doses of Insulin Administered Intravenously and Subcutaneously in Psychotic Patients." Irving C. Sherman, John C. Mergener, Abraham A. Low, Chicago.

"Nitrogen Treatment in Schizophrenia." Carl E. Lengyel, Elgin.

SYMPOSIUM ON PROBLEMS IN NEUROSYPHILIS

"Cardiovascular and Systemic Morbidity Following Hyperpyrexia in Central Nervous System Syphilis." Alan A. Lieberman, Charles Katz, Elgin.

"Modification of the Use of Typhoid Vaccine in the Production of Hyperpyrexia." H. H. Goldstein, Jack Weinberg, Chicago.

"Surgery in Syphilitics With a Study of Cases in Mental Hospitals." George A. Wiltrakis, Anthony V. Partipilo, Louis Olsman, Chicago.

Role of Neurosyphilis in Disturbances of "Anal Sphincter Tone." (To be read by title.) Bernard L. Greene, Louis H. Block, Elgin.

CENTRAL STATES SOCIETY OF INDUSTRIAL MEDICINE AND SURGERY

Harold A. Vonachen, President.....Peoria, Illinois
Urban E. Gebhard, Vice-President...Milwaukee, Wis.
Frank P. Hammond, Secretary-Treasurer.Chicago, Ill.
Edward C. Holmblad, Program Chairman.Chicago, Ill.

TUESDAY MORNING, MAY 21, 1940

9:30—"Medicolegal Typing of Occupational Disease Cases." (With four illustrative case histories.) C. O. Sappington, Chicago.

10:00—Ten Minute Reports followed by Round Table Discussion as to the "Newer Developments and Present Status of Following Industrial Problems."

"Physical Examinations." Urban E. Gebhard, Milwaukee, Wisconsin.

"Specific Loss Appraisal." V. S. Cheney, Chicago.

"Hernia." Will Lyon, Chicago.

"Absenteeism." James H. Finch, Champaign.

"Back Injuries." Fred Slobe, Chicago.

"Syphilis in Industry." Harold A. Vonachen, Peoria.

"Economics of Industrial Medicine and Surgery." James A. Valentine and Fred M. Miller, Chicago.

12:00—Luncheon.

TUESDAY AFTERNOON, MAY 21, 1940

Joint Session with Section on Surgery.

"Wound Healing." Michael Mason, Chicago.

Discussion opened by Hilger P. Jenkins, Chicago.

"Treatment of Infected Wounds." David J. Lewis, Springfield.

Discussion opened by

"Postoperative Thrombosis and Embolism." Geza de Takats, Chicago.

Discussion opened by

"Treatment of Compound Fractures." W. R. Cubbins, J. J. Callahan, and Carlo S. Scuderi, Chicago.

Discussion opened by

"Treatment of Burns." Chester R. Zeiss, Chicago.

Discussion opened by

(For abstracts of papers, See Section on Surgery.)

VETERANS' SERVICE COMMITTEE DINNER

The annual dinner of the Veterans' Service Committee will be held on Tuesday evening May 21, 1940 at 6:00 p. m.

Dr. F. O. Fredrickson, Chairman of the Committee, will officiate as presiding officer, and their dinner program will be announced in the May issue of the ILLINOIS MEDICAL JOURNAL.

The Illinois State Medical Society will be host to the Women Members of the State Medical Society at a dinner in Peoria, Tuesday Evening, May 21, 1940.

The local Chairman of Arrangements is Dr. Margaret B. Meloy of Peoria. Membership tickets in the State Society should accompany requests for reservation.

The following is the tentative Dinner Program:

Short Address—Dr. Elizabeth R. Miner, President Illinois State Branch No. 17 A. M. W. A.

Other addresses by Dr. Nelle S. Noble, Des Moines, Iowa, President A. M. W. A.; Dr. Bertha Van Hoosen, Chicago; Dr. Elizabeth B. Ball, Springfield; Dr. Esther S. Hodel, Morton; Dr. Carolyn N. MacDonald and others.

WOMAN'S AUXILIARY PROGRAM

All General Meetings and Social Activities Are Open to All Doctors' Wives.

MONDAY, MAY 20, 1940

1:00-9:00 P. M.

Registration—Pere Marquette and Jefferson Hotels.

TUESDAY, MAY 21, 1940

8:00 A. M. Registration—Pere Marquette and Jefferson Hotels.

10:00 A. M. Pre-convention Board Meeting—Jefferson Hotel. (Board Members Only.)

Mrs. Charles C. Winning, President.

11:00 A. M. "School of Instruction on Auxiliary Activities." Jefferson Hotel. (Open to all doctors' wives.)

Mrs. George Walbright, Presiding.

Mrs. Harry Otten, Co-Chairman.

12:30 Luncheon—Jefferson Hotel, French and Jefferson Rooms. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Mrs. Carl Sibilsky, Local Chairman.

Speakers:

Address of Welcome. Mrs. Orville Barbour.

Convention Announcements. Mrs. Milo Easton.

Address. Mrs. Rollo Packard, President National Auxiliary.

2:00 P. M. General Meeting—Gold Room, Jefferson Hotel. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Invocation. Bishop W. L. Essex, Bishop Quincy Diocese Episcopal Church.

Welcome. Mayor David McCluggage.

Response. Mrs. William Raim.

3:45 P. M. Tour of Holt Manufacturing Company. (Caterpillar Tractors.) (Open to all doctors' wives.)

Cars leaving Liberty Street entrance of Jefferson Hotel.

6:30 P. M. Dinner—Pere Marquette Ball Room, followed by Fashion Revue of private collection from New York and Chicago, with professional models. (Open to all ladies attending the convention.)

WEDNESDAY, MAY 22, 1940

8:00 A. M. Registration—Pere Marquette and Jefferson Hotels.

8:00 A. M. Board Breakfast. (Board Members Only.)

9:15 A. M. Busses leave for Breakfast—Peoria Country Club. (Open to all doctors' wives.)

9:30 A. M. General Meeting—Ball Room, Jefferson Hotel. (Open to all doctors' wives.)

Mrs. Charles C. Winning, Presiding.

Memorial Services. Mrs. Orville Barbour, Chairman.

Scripture and Prayer. Mrs. A. A. Knapp.

Solo—Lord's Prayer (Stenson). Mrs. Clarence Magaret.

In Memoriam.

Memorial Roll Call.

Candle Light Service.

Remembrance Flowers. Mrs. Orville Barbour.

Solo—Lords Prayer (Stenson). Mrs. Clarence Magaret.

"Taps" (All stand in memory.) Mrs. Clarence Magaret.

12:00—Return from Country Club Breakfast.

12:45—President's Luncheon, French and Jefferson Room, Jefferson Hotel.

Mrs. Charles C. Winning, Presiding.

Mrs. Allen Foster, Local Chairman.

Announcements. Mrs. Milo Easton, Convention Chairman.

Speakers: (To be announced later.)

Followed by Mrs. E. C. Kelly, Chairman (Reception.)

3:30 P. M.—Post Convention Board Meeting. (Board Members Only.)

Mrs. H. J. Dooley, Presiding.

5:00 P. M.—Open House held by Peoria doctors and their wives. (Open to all doctors and their wives attending the convention.)

Indicate at time of registration if you wish to attend open house and also if you have already been asked. If not, Hostess Committee will arrange for you.

7:00 P. M.—President's Dinner Dance.

SOCIAL FUNCTIONS FOR ALL LADIES

TUESDAY, MAY 21, 1940

12:30—Luncheon—Jefferson Hotel, French and Jefferson Rooms.

2:00 P. M.—Tour of City for ladies not attending Auxiliary activities.

3:45 P. M.—Tour of Holt Manufacturing Company. (Caterpillar Tractors.) (Cars leaving Liberty Street entrance of Jefferson Hotel.)

6:30 P. M.—Dinner—Pere Marquette Ball Room, followed by Fashion Revue.

WEDNESDAY, MAY 22, 1940

9:15 A. M.—Busses leave for Breakfast—Peoria Country Club. (Busses leave Main Street entrance of Pere Marquette Hotel, and Fulton Street entrance of Jefferson Hotel.)

12:00—Return from Country Club Breakfast.

12:45—President's Luncheon, French and Jefferson Room, Jefferson Hotel.

5:00 P. M.—Open House held by Peoria Doctors and their wives.

7:00 P. M.—President's Dinner Dance.

RULES GOVERNING PRESENTATION OF PAPERS

"All papers read by members shall be limited to twenty minutes, and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

"All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the Illinois Medical Journal.

"A paper not heard in its scheduled turn shall be held subject to call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

"All subjects shall be confined strictly to the subject in hand.

"No paper shall appear in the printed transactions of the meeting unless read in full or in abstract."

(From By-Laws of Illinois State Medical Society.)

SCIENTIFIC EXHIBITS

Frank J. Jirka, Chairman.....Chicago
Nathan Smith Davis, III, Director of Exhibits .....Chicago

Booth —. "Posture Plays an Important Part in the Physical Therapy of Bed and Convalescent Patients." American Physiotherapy Association, Chicago.

Six posters, 22 x 28 inches with photographs showing the following: Good and bad posture of an arthritic in bed with a view to preventing the following deformities—poor chest posture affecting vital capacity, forward head, knee flexion contractures, adduction and inward rotation of shoulders, adduction and external rotation of legs, foot drop and wrist drop;

Poor posture in a wheel-chair showing swelling, in a lower leg and the correction;

Instruction to a fracture case in a walker to precede instruction in walking with crutches;

Instruction in crutch-walking to a fracture case showing crutches of incorrect length poorly placed, and soft shoes with corrections.

Booth —. "Plastigut—A New Suture Development." Joseph E. Bellas, The Collins Clinic, Peoria.

A comparative study of suture reactions with current sutures and Plastigut. A new classification of sutures is brought forth as a basis for future evalution of sutures. Plastigut is a new suture which plastics are the essential components. Plastigut is supported by extensive, experimental, clinical and microphotographic studies and is offered to the surgical profession as an approach to the ideal suture.

Booth —. "Avitamosis in the Alcoholic." Don C.

Sutton and John Ashworth, Northwestern University School of Medicine, Chicago.

The exhibit will consist of charts, color transparencies and still projection of color transparencies. The charts will be descriptive of especially the neuritis and pellagra lesions. A chart of the vitamins involved, and an outline of treatment.

Booth —. "End Results in Pulmonary Tuberculosis." Jerome R. Head, Edward Sanatorium, Naperville.

The exhibit will consist of printed charts and tables showing the five-year end results in 500 cases of pulmonary tuberculosis. There will be slides also showing the results of the various types of cases.

Booth —. "Surgical Pathological Studies of Carcinoma of the Rectum and Colon." R. K. Gilchrist, Rush Medical College, Presbyterian Hospital, Chicago.

This exhibit is a summary of the findings in 125 surgical specimens. The distribution of metastases to the 7000 lymph nodes examined microscopically from these specimens is shown by charts, specimens and illustrations. The results of experimental studies on the manner of spread of carcinoma through the lymph system, are shown. Specimens and charts demonstrate the perforation of diverticula in the presence of carcinoma. The effect of size of tumor, duration of symptoms, grade of tumor, age and sex of patient are shown in their relation to lymphatic metastases.

Booth —. "Segmental Retrograde Sclerosis in the Treatment of Leg Varices." James Graham, Springfield Clinic, Springfield.

Models and translites illustrate four classes of leg varices, bases on valvular competency. Saphenous vein ligation, combination with retrograde injection of sclerosing substance, is advocated for those classes in which valvular incompetency plays a major role. In this connection, segmental retrograde sclerosis by the ureteral catheter method.

Booth —. "Acute Appendicitis." William Kleitsch, R. B. Malcolm, L. J. Rossiter, Warren H. Cole, Department of Surgery, University of Illinois College of Medicine, Chicago.

About six models illustrating the stages of inflammation incident to acute appendicitis with and without perforation. One or two drawings to illustrate dangers incident to catharsis. Several placards supply information regarding incidence, therapy, etc.

Booth —. "What Radiation Technic Gives the Best Clinical Results in Uterine Cervical Cancer?" Harold Swanberg, Quincy X-Ray and Radium Laboratories, Quincy.

Exhibit will consist of charts showing the results obtained and the technics of radiation being used at the leading radiotherapeutic centers of the world in the treatment of uterine cervical malignancy.

Booth —. "The Neurocirculatory Clinic. Its Scope and Material." Geza deTakats, William C. Beck, Joseph H. Jesser, Donald Miller, P. J. Sarma, University of Illinois School of Medicine, Chicago.

Instead of separating patients in medical, surgical, orthopaedic, and neuro-phychiatric clinics, it is the doctors that are grouped around the patient. As a general principle, a synthesis of knowledge is emphasized instead of a fragmentation by overspecialization. This is demonstrated on five disease entities, namely: congenital vascular anomalies, varicose veins, peripheral vascular disease, hypertension, pulmonary embolism.

In each group the diagnostic methods, the types of treatment and the results are shown by charts, drawings, photographs and individual case histories. Such a group-study improves diagnosis, accumulates material for undergraduate and postgraduate teaching and stimulates clinical research.

Booth —. "Controlled Evaporation of Liquid Oxygen. A new and simple method of production of oxygen gas at the bedside." John A. Mathis, M.D., and Mr. Roland Milan, Pinckneyville.

Apparatus measures 28 inches diameter by 40 inches in height. No cylinders are used, but liquid oxygen in standard commercial 25 liter container supplies the source of gas. The apparatus comprises a method of returning liquid oxygen to the gaseous state at any rate of speed desired, under complete control of the operator, together with safety measures which make the apparatus safer than cylinders of the gas under pressure.

This idea and its execution are entirely new, and have not been demonstrated elsewhere. By its use, it is possible to use 6 liters of oxygen per minute at a cost of about 5c per hour. In cylinders, the cost is from 15 to 30 cents per hour. We have tried out the apparatus for two years, and it has no faults or dangers.

Booth —. "Serum as Substitute for Blood in Transfusions." S. O. Levinson, H. Necheles, F. Neuwelt, Michael Reese Hospital; Samuel Deutsch, Serum Center and Department of Gastro-Intestinal Research; Chicago.

Pictures, charts, graphs, tables, hymograph records and short explanatory descriptions of experiments proving the practicability and advantages of serum versus blood transfusion. Pictures of bleeding of donors and of processing of serum and its preparation for storage, transportation and transfusion. Charts of serum transfusion in patients. Complete paper appeared in A.M.A. Journal of February 10, 1940.

Booth —. "Pulmonary Tuberculosis. Diagnosis and Treatment by Surgical Collapse." Municipal Tuberculosis Sanitarium, Chicago.

Four illuminated cabinets demonstrated by x-ray films and pathologic specimens, pulmonary tuberculosis in all stages of the disease.

Collapse treatment and the results obtained by pneumothorax and surgical procedures.

Booth —. "Ectopic Pregnancy." Frederick H. Falls, Miss Charlotte S. Holt, Illinois State Department of Public Health, and University of Illinois College of Medicine, Chicago.

A series of ten bas-relief models cast in special plaster composition and painted in natural colors, depicting various types of ectopic pregnancy, such as interstitial, ovarian, isthmic, ampullary and escondary abdominal, a colpocentesis of a pelvic hematocele, broad ligament hematoma, a fibroid uterus causing compression of tube, and bilateral tubal pregnancy. A model showing the story of normal fertilization and nidation and sites of ectopic implantation. These will be types of ectopic pregnancy as seen at operation by the surgeon. Lettered charts outlining etiology, diagnosis, treatment and mortality statistics will be added. Photomicrographs of each type will show as transparencies, and a unique x-ray picture of a ruptured interstital ectopic pregnancy with a baby weighing five pounds, will be shown.

Booth —. "Disease of the Thyroid Gland." Arnold S. Jackson, The Jackson Clinic, Madison, Wisconsin.

Models and charts on diagnosis and treatment of cretins. Maps, charts, showing growth of cretinism and distribution of the 500 cases reported in the United States. Colored illustrations showing technique of thyroidectomy by electro-surgery for exophthalmic goiter. Colored illustrations and models of

the various types of goiter, their distinguishing characteristics, and the methods of treatment. Illustrations, charts and data on hypothyroidsim and myxedema illustrating typical and atypical cases, signs, symptoms, methods of treatment and results. Moving pictures of cretins, diagnosis of various types of goiter and the technique of thyroidectomy.

Booth —. "Aerobiology as Applied to Allergy." Oren C. Durham, Abbott Laboratories, North Chicago.

Apparatus and methods used and results obtained in 350 uniform seasonal atmospheric surveys (1925-1939) and 400 upper air tests of pollens, fungus spores and insect particles. Most of the work has been done in the United States, Alaska and Canada (cooperation of United States Weather Bureau and Canadian Meteorological Service). Limited data for Cuba, Mexico, Argentina and Japan. Maps, Tables and Graphs, including new "ragweed pollen index" of North America. Technique of identification and counting will be demonstrated. A reference collection of 400 pollen and fungus spore specimens will afford abundant opportunity for practice.

Booth —. "Disease of the Lung." E. J. Kraus and H. M. Pollak, St. Francis Hospital, Peoria.

Pathological specimens of various lung diseases; histological photographs, case histories and x-ray films.

Booth —. "Technique of Subtotal Thyroidectomy Under Local Anesthesia." David A. Bennett, Coleman Clinic, Canton.

Demonstration of technique used in subtotal throidectomy by use of local anesthesia. Demonstrated by drawings and colored paintings of the various steps or stages of the operation. Colored movies are also used in the booth which show technique of the operation.

Booth —. "Clinical Cystometry. Presentation of a New Cystometrograph." Herbert E. Landes and Harold C. Voris, Departments of Urology and Neurosurgery, Loyola University College of Medicine, Mercy Hospital, and Loyola Clinics, Chicago.

Exhibit consists of photograph of cystometrograph in operation. Model of instrument itself. Twenty-six charts showing a wide variety of tracings obtained in different neurologic lesions together with a chart showing innervation of bladder and urethra and finally a printed chart summarizing the content of the exhibit.

Booth —. "Cerebral Manifestations in the Newborn." Abraham Levinson, Cook County Hospital, Chicago.

A series of charts outlining the etiology, symptomatology, and treatment of Cerebral Manifestations of the Newborn, including anoxemia, cerebral agenesis, acute infections, tetany and hypoglycemia. The exhibit will also include lantern slides and specimens.

Booth —. "Plastic and Reconstructive Surgery." Paul W. Greeley, University of Illinois College of Medicine, Department of Surgery, Division of Plastic Surgery, Chicago.

An exhibition of representative cases in photograph demonstrating a wide variety of plastic problems, together with the results obtained. Each case will be briefly discussed by suitable legends or diagrams. On another card will be noted existing axioms of plastic surgery pointing out certain of the more common principles in this field.

Booth —. "Peripheral Vascular Diseases." G. H. Marquardt, T. R. VanDellen, R. C. Roberts, S. Perlow, and N. S. Davis, III, Florsheim Clinic, Northwestern University College of Medicine, Chicago.

Results of management of those with peripheral arteriosclerosis and thrombo-angiitis obliterans and those with vasospastic arterial disease over a period of eight or ten years. Plethysmographic studies before and after various types of therapy.

Booth —. "The Tumor Clinic in the Small Private Hospital." Ravenswood Hospital Tumor Clinic (N. P. Saunders, M.D.) Ravenswood Hospital, Chicago.

An exhibit demonstrating the method of establishing a tumor clinic in a small private hospital. The method of conducting the clinic and advantages of the clinic to patients, physicians and the hospital.

(a) Exhibit includes charts showing activities of the clinic such as examining, diagnosing and outlining treatment of tumor cases.

(b) Demonstration of cases and specimens before staff meetings.

(c) Perfection of a follow-up system.

Booth —. "Gall Bladder Disease. The Gall Bladder Study Group of Michael Reese Hospital." Heinrich Necheles, Sidney A. Portis and Ralph Bettman, Michael Reese Hospital, Chicago.

The exhibit will show the physiologic, medical and surgical aspects of gall bladder disease with a discussion of the various types of work done in the Department of Physiology relative to the gall bladder. The medical pre- and post-operative management of gall bladder disease will be discussed. The surgical aspect will show the results of the surgical approach to the problem of bile tract disease, the indications for surgery, the types of incisions and the mortality and morbidity statistics all of which will be amply illustrated.

Booth —. "Implantation of the Ureter into the Colon for Exstrophy of the Urinary Bladder. Ureterointestinal anastomosis." Roy E. Brackin, Rush Medical College, University of Chicago, Department of Surgery, Chicago.

The exhibit consists of photographs of patients before and after transplantation of the ureters to the colon and roentgenological studies, blood findings, clinical reactions and end results up to one year after bilateral ro-signoidal anastomosis in the treatment of exstrophy of the urinary bladder. One successful case of twenty years is presented with complete charts of pre- and post-operative blood and urinary tract studies up to one year after operation including bilateral transplantation of the ureters and total cystectomy, one case of three years of age. This method of procedure will be shown by drawings. This was shown in the scientific exhibits of 1939 and the experimental results demonstrated. The present exhibit presents the results in a small number of cases, among whom there were no deaths following the operation. A motion picture in color of the procedure will be shown. This film is about 300 feet.

Booth —. "Occupational Hazards." Department of Public Health, State of Illinois, A. C. Baxter, Director; Henry Horner, Governor, Springfield.

THE HALL OF HEALTH

PEORIA ARMORY

The following exhibits, compiled for lay education, may be seen at the Peoria Armory:

American Association of Medical Social Workers.

American Red Cross Civilian Relief.

American College of Surgeons. "Fractures."

American Medical Association. "Food Fads." "Heart

Disease." "Dangers of Self-Diagnosis and Self-Medication." "Prevention of Eye Injuries." "Prevention of Burns."

American Social Hygiene Association. "Illegal and Unethical Practices in Relation to Syphilis and Gonorrhea."

Cancer Committee, Illinois State Medical Society. Women's Field Army, Illinois Division of the American Society for the Control of Cancer. "Prevention and Control of Cancer."

Chicago Society of Allergy. "What Is This Thing Called Allergy?"

Chicago Heart Association. "Prevention of Heart Disease Is Better Than Cure."

Illinois Physicians and Surgeons. Pictures of pioneer physicians and surgeons. Many are from collection of Dr. Carl E. Black, Jacksonville.

Chicago Rapid Transit Company, Medical Department. "The Evolution of Resuscitation."

Works Progress Administration of Illinois. Health Projects in Illinois."

Woman's Auxiliary—Illinois State Medical Society. "History of Medicine in Illinois. Illinois Occupational Therapy Association. "Occupational Therapy." Illinois State Planning Commission. "General Health and Educational Exhibit."

Illinois Society for Prevention of Blindness (in cooperation with the Works Progress Administration). "Prevention of Blindness."

Illinois Congress of Parents and Teachers. "Health Activities."

Illinois Society for Mental Hygiene. "The Physician As a Mental Hygienist."

Department of Public Health, State of Illinois. "Public Health and Preventive Medicine."

Illinois State Nurses' Association.

Illinois Dietetic Association. "What Is Your Score?"

Enucational Committee—Illinois State Medical Society. "Your Medical Society and You."

Department of Public Health—(Division of Maternal and Infant Hygiene of the State of Illinois). University of Illinois College of Medicine (Department of Obstetrics and Gynecology). Maternal Welfare Committee (Illinois State Medical Society). "The Essentials of Prenatal Care."

Metropolitan Life Insurance Company. "New Methods for Pneumonia Control."

St. Francis Hospital, Peoria. "Pathological Specimens."

Peoria Municipal Tuberculosis Sanitarium. "Diagnosis and Treatment of Pulmonary Tuberculosis."

Peoria County Tuberculosis Association. "Tuberculosis."

Lions Club of Peoria. "Safety and Health."

Peoria Council of Girl Scouts, Inc. "Child Care, a Part of the Girl Scout Program."

Peoria Department of Health. "Quackery."

Peoria Police Department. "Accident Investigation Bureau" (First Aid Methods and Equipment used by Police in Investigation of Traffic Accidents).

Peoria Maternity Center. "Maternal Welfare Work in Peoria."

Boy Scouts of America. Creve Coeur Council. "Safety Through Skills."

Visiting Nurse Association of Peoria. "How to Be Happy Tho' Sick."

Illinois Bell Telephone Company. "First Aid Demonstration."

Public Service Company of Northern Illinois. "Night Hazards of Driving."

Sharp & Smith Hospital Division—A. S. Aloe Company. "The Original Dionne Incubator."

TECHNICAL EXHIBITORS AT THE 1940 ANNUAL MEETING

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Arlington Chemical Company, Yonkers, New York.

Bard Parker Company, Inc., Danbury, Connecticut.

W. D. Bates, Rockford, Illinois.

Bilhuber-Knoll Corporation, Orange, New Jersey.

The Borden Company, New York, N. Y.

Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

The Coca-Cola Company, Atlanta, Georgia.

Curvlite Products, Inc., New York, N. Y.

Davies, Rose & Company, Limited, Boston, Massachusetts.

F. A. Davis Company, Philadelphia, Pennsylvania.

DePuy Manufacturing Company, Warsaw, Indiana.

Doho Chemical Corporation, New York, N. Y.

Eli Lilly and Company, Indianapolis, Indiana.

H. G. Fischer & Company, Chicago, Illinois.

C. B. Fleet Company, Lynchburg, Virginia.

General Electric X-Ray Corporation, Chicago, Illinois.

Gerber Products Company, Fremont, Michigan.

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Mead Johnson and Company, Evansville, Indiana.

Medical Arts Supply Company, Chicago, Illinois. (Lepel High Frequency Laboratories.)

The Medical Protective Company, Wheaton, Illinois.

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The Mennen Company, Newark, New Jersey.

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N

O

Park, Davis & Company, Detroit, Michigan.
Pet Milk Sales Corporation, St. Louis, Missouri.
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Philip Morris & Company, Ltd., Inc., New York, N. Y.

Q

R

W. B. Saunders Company, Philadelphia, Pennsylvania.
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T

U & V

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One-Hundredth Annual Meeting

PEORIA, ILLINOIS

May 21, 22, 23, 1940

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Peoria—May 21, 22, 23, 1940

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GEORGE W. MICHELL .....*Vice-Chairman*

C. U. Collins — H. L. Pintler
R. A. Hanna — H. M. Sedgwick
A. L. Corcoran — J. H. Ulrich
E. Z. Levitin — G. U. Washburn
F. S. Davis — H. B. Knowles
A. H. Clark — J. T. Wead
W. A. Gott — E. E. Royce
D. H. Morton — J. W. Daugherty
Wm. Blender, Sr. — H. L. Williams
J. F. Sloan — E. H. Bradley
W. A. Borin — F. D. Loewen
T. S. Egan — J. C. Roberts
J. P. Sparks — Bruce Ryder
L. E. Monroe — H. E. Pintler
R. B. Roberts — G. C. Lewis
A. J. Foerter — P. A. Cusack
F. G. Hopkins — L. A. Burhans
A. A. Knapp — T. C. Coggeshall
C. G. Blake — W. T. Marrs
P. F. Jones — A. G. Ekonomou
J. E. Welsh — E. E. Henson
R. L. Eddington — A. S. Plummer

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ALLEN A. FOSTER .....*Vice-Chairman*

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J. M. McCuskey — Victor Williams
George M. Borin — F. C. Hammitt
Frank C. Green

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MILO T. EASTON .....*Vice-Chairman*

F. C. Endres — George R. Seward
Thomas H. Sternberg — Chas. F. Sutton
J. H. Siegfried

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C. P. STRAUSE .....*Vice-Chairman*

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W. D. Madison — M. E. Aaberg
George L. Cohen

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C. D. SNELLER .....*Vice-Chairman*

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E. Z. Levitin — Hugh E. Cooper
E. E. Nystrom — Milo T. Easton

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R. A. Slater — B. J. Heymann
Floyd W. Castator — D. M. Ernest

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W. H. HOLBROCK .....*Vice-Chairman*

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Robert K. Dean

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L. D. Whittaker — J. E. Bellas
Robert M. Sutton — E. C. Burhans
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C. S. Turner — H. A. Durkin

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E. Z. LEVITIN.....*Chairman*
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Lucia H. Lucy — Lillian L. Rich
Molly D. Robertson — Esther A. H. Stone

ILLINOIS STATE MEDICAL SOCIETY
ONE HUNDREDTH ANNUAL MEETING
Peoria, Illinois
May 21, 22, 23, 1940

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

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Mrs. John P. Crotty, *Co-Chairman*...East St. Louis

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DR. JOHN R. NEAL.....Chicago
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DR. EDWIN S. HAMILTON.....Kankakee

PARLIAMENTARIAN—Mrs. Lucius Cole.....River Forest

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MRS. BRYANT H. TREWYN, *General Chairman* for Ladies' Social Activities.

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Mrs. J. T. Jenkins	Mrs. O. E. Barbour
Mrs. C. Magaret	Mrs. Babcock Meloy

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Mrs. H. F. Diller	Mrs. C. V. Ward
Mrs. M. G. Bohrod	

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MRS. CLARENCE WARD.....*Chairman*

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MRS. G. M. FRYE.....*Chairman*
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Mrs. D. D. Burroughs	Mrs. Oliver Rian
Mrs. Joseph Duane	Mrs. Geo. Parker
Mrs. E. L. Aaberg	Mrs. R. A. Hanna
Mrs. P. R. Dirkse	Mrs. F. G. Hopkins
Mrs. C. U. Collins	Mrs. George Michell
Mrs. Maxim Pollak	Mrs. E. H. Bradley
Mrs. J. C. Foberts	Mrs. Wm. Blender
Mrs. David Fey	Mrs. E. P. Burt
Mrs. Jas. O'Connor	Mrs. G. M. Frye
Mrs. John McCorvie	

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MRS. A. D. PHILLIPS.....*Chairman*

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Mrs. F. L. Stuttle	Mrs. W. L. Bowen
Mrs. J. T. Jenkins	Mrs. E. P. Burt

DINNER COMMITTEE—Pere Marquette May 21, 1940

MRS. W. A. HINCKLE.....*Chairman*

Mrs. G. R. Seward	Mrs. F. H. Decker
Mrs. W. C. Williams	Mrs. P. R. Dirkse
Mrs. Leslie Rutherford	Mrs. M. G. Bohrod
Mrs. D. D. Burroughs	Mrs. C. G. Farnum

HOSPITALITY COMMITTEE FOR DINNER

MRS. GEORGE MICHELL.....*Chairman*

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Mrs. J. C. Roberts	Mrs. H. Vonachen
Mrs. A. E. Cohen	Mrs. W. A. Malcolm
Mrs. Oliver Rian	Mrs. F. L. Stuttle
Mrs. W. Cooley, Jr.	Mrs. J. A. Eastman
Mrs. L. M. Coffey	Mrs. C. P. Strause
Mrs. P. R. McGrath	Mrs. R. A. Hanna
Mrs. A. Sprenger	Mrs. C. U. Collins
Mrs. Glen Allen	Mrs. S. Horwitz
Mrs. C. W. Magaret	Mrs. F. C. Hammitt
Mrs. Allan Foster	Mrs. E. L. Aaberg

Mrs. David Fey — Mrs. J. Vonachen
Mrs. C. Fischer — Mrs. A. D. Phillips
Mrs. Jas. O'Connor — Mrs. E. C. Kelley
Mrs. H. F. Diller — Mrs. P. F. James
Mrs. Milo Easton — Mrs. M. E. Aaberg
Mrs. Maxim Pollak — Mrs. E. A. Garrett

TRANSPORTATION TO PEORIA COUNTRY CLUB (Via Senic Route for Breakfast—May 22, 1940)

MRS. JOHN McCORVIE.....*Chairman*
Mrs. C. D. Branch — Mrs. F. H. Decker
Mrs. C. P. Strause — Mrs. G. R. Seward

BREAKFAST—PEORIA COUNTRY CLUB

MRS. JOHN VONACHEN.....*Chairman*
Mrs. O. Rian — Mrs. Fred Stuttle
Mrs. W. A. Malcolm — Mrs. George Parker
Mrs. H. A. Durkin — Mrs. J. T. Jenkins
Mrs. Glen Allen — Mrs. J. F. Duane

PROGRAM COMMITTEE—BREAKFAST

MRS. DAVID FEY.....*Chairman*
Mrs. C. Fischer — Mrs. M. E. Aabert
Mrs. A. D. Phillips
Mrs. Wm. Cooley, Jr.

HOSPITALITY COMMITTEE—BREAKFAST

MRS. E. H. BRADLEY.....*Chairman*
Mrs. R. L. Green — Mrs. J. E. McCorvie
Mrs. C. G. Farnum — Mrs. F. F. Haas
Mrs. E. C. Burhans — Mrs. Walter Baer
Mrs. Leslie Rutherford — Mrs. Geo. Washburn
Mrs. F. E. Fielding — Mrs. C. D. Branch
Mrs. J. H. Kinnaman — Mrs. G. M. Frye
Mrs. W. A. Hinckle — Mrs. W. J. Roche
Mrs. P. R. Dirkse — Mrs. Walter King
Mrs. S. Miller — Mrs. E. Z. Levitin
Mrs. W. H. Weinkauff — Mrs. P. A. Cusack
Mrs. George Parker — Mrs. G. R. Seward
Mrs. E. E. Nystrom — Mrs. W. C. Williams
Mrs. C. V. Ward — Mrs. M. G. Bohrod
Mrs. E. P. Burt — Mrs. Wm. Major
Mrs. D. D. Burroughs — Mrs. A. P. Kannapel

OPEN HOUSE BEFORE PRESIDENT'S DINNER

MRS. C. S. TURNER.....*Chairman*

ASSISTING HOSPITALITY COMMITTEE at Dinner Tuesday Night and Breakfast Wednesday Morning

MRS. SIDNEY A. SMITH, *Chairman*..(Chillicothe)
Mrs. A. H. Clark.....Elmwood
Mrs. George Cohen .....Washington
Mrs. R. L. Eddington.....Lacon
Mrs. F. C. Green.....Chillicothe
Mrs. W. C. Kinser.....Glasford
Mrs. D. H. Morton.....Elmwood
Mrs. R. B. Roberts.....Brimfield
Mrs. B. I. Ryder.....Henry
Mrs. C. Sutton .....Chillicothe
Mrs. J. E. Welsh.....Brimfield
Mrs. T. C. Coggeshall.....Henry
Mrs. J. W. Daugherty.....Chillicothe
Mrs. T. S. Egan.....Mapleton
Mrs. E. E. Henson.....Princeville
Mrs. L. E. Monroe.....Washington
Mrs. F. T. Potts.....Lacon
Mrs. E. E. Royce.....Sparland
Mrs. J. H. Siegfried.....Lacon
Mrs. J. T. Wead.....Wyoming
Mrs. Victor Williams .....Trivoli
Mrs. H. A. Zinzer.....Washington

NOTES ON TECHNICAL EXHIBITS

ABBOTT LABORATORIES—Booth 46

You are heartily invited to inspect the comprehensive selection of pharmaceutical specialties on display including large volume Intravenous Solutions, Metaphen, Vitamins, Procaine, Ephedrine and Pollen products. Nembutal and Pentothal Sodium, the new intravenous quick-acting short-duration anesthetic will also be featured.

Please feel free to discuss the newer products with the Abbott-trained representatives in attendance.

A. S. ALOE COMPANY—Booth

A. S. Aloe Company of St. Louis will display a complete general line of physicians' instruments, supplies and equipment. Aloe Steeline, the improved design in treatment room furniture, will be featured, also the Aloe Diagnostic X-Ray. The display will be in charge of Aloe representative, Val H. Drennan.

THE ARLINGTON CHEMICAL COMPANY—Booth 12

The Arlington Chemical Company invites you to inspect their line of Proteins and Pollens for diagnosis and treatment of allergic conditions. And their new product—AMINOIDS. Aminoids represents a combination of amino acids and has proved of marked therapeutic value in malnutrition, underweight and loss of appetite.

Dr. L. A. Kitzman, in charge of the exhibit, will be happy to answer inquiries regarding this new product; also inquiries relative to hayfever, asthma, etc.

BARD PARKER COMPANY, INC.—Booth 44

Bard Parker will exhibit the following products: Rib-Back surgical blades, Renewable Edge scissors, Hematological Case for obtaining blood samples at the bedside, Ortholator for obtaining accurate dental radiographs, Formaldehyde Germicide and Instrument Containers for the rust-proof sterilization of surgical instruments.

W. A. BATES—Booth

BILHUBER-KNOLL CORPORATION—Booth 45

We, the Bilhuber-Knoll Corporation, welcome you. Here you will again meet Mr. Kidwell and Mr. Murbach who are ably prepared to answer questions regarding Dilaudid, Metrazol, Theocalcin, and other N.N.R. products of our manufacture. They will also be glad to acquaint you with our policy relating to the production in our Orange, N. J. plant of "original medicinal chemicals" which merit your continued daily use and your endorsement.

THE BORDEN COMPANY—Booth 10

Full information on BIOLAC, the new *liquid* modified milk for infants, will be available at the Borden Booth.

Also exhibited will be other Borden products for infant feeding, notably Klim, Dryco, Beta Lactose, Merrell-Soule products, and Borden's Irradiated Evaporated Milk.

CIBA PHARMACEUTICAL PRODUCTS, INC.—Booth 24

Ciba Pharmaceutical Products, Inc., will feature their well-known line of specialties, including Coramine, Nupercainal, Digifoline, Trasentin, etc. Latest information, literature and reprints of recent papers by outstanding endocrinologists and investigators will be available describing Perandren and Di-Ovocylin and their clinical application where androgenic and estrogenic therapy is indicated. Representatives of the firm will be in attendance and will be glad to answer any questions in regard to the products displayed.

THE COCA COLA COMPANY—Booth 20

The Coca-Cola Company will be host to the doctors calling at their booth, and Coca-Cola will be served for the pause that refreshes.

CURVLITE PRODUCTS, INC.—Booth 53

DAVIES, ROSE & COMPANY, LIMITED—Booth "C"

Davies, Rose & Company, Limited, Boston, Mass., hope that you will visit their headquarters. The preparations that this firm is exhibiting have a world-wide reputation. Physiological or chemical tests are made to assure their standardization. Clinical experience vouches for their dependability.

Mr. G. L. Cunningham will be at the booth to welcome you.

F. A. DAVIS COMPANY—Booth 25

Be sure to visit booth 25 and examine our most recent publications such as Lederer—Ear, Nose and Throat; Bland & Montgomery—Practical Obstetrics; Reimann—Treatment in General Medicine; Stroud—Diagnosis and Treatment of Cardiovascular Disease; Piersol—The Cyclopedia of Medicine; Bland—Gynecology; Smith—proctology for the General Practitioner; Robertson—Diagnostic Signs, Reflexes and Syndromes. F. A. Davis Company.

DePUY MANUFACTURING COMPANY—Booth 14

DePuy Manufacturing Company will exhibit for your consideration, Fracture Appliances to be used by the exacting and careful surgeon. Bone Screws, Bone Plates, Screw Drivers, the new White Type Sterilizing Screw Rack, Friddle Screw Driver, White Type Mortising Chisel, and the improved Lovejoy Drill will be on display. We will have a complete line of Splints for your consideration.

We want you to appreciate the fact that you can come into our Booth and feel at home and there will be no high pressure methods used. Mr. James Rippey will be in charge of this Exhibit, and he is amply able to care for your needs.

THE DOHO CHEMICAL CORPORATION—Booth 21

The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modeled under the supervision of outstanding otologists. Each of these drums depicts a different pathologic condition based upon actual case observation, and prepared in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

As the observed looks into the large ear through a proportionately sized speculum, the ear drums appear successively within the canal so as to similate actual conditions seen in life. The successive changes of the ear drums are affected by automatic mechanism, and accompanied by a brief description of the condition.

This is the first time that such a complete modeling of ear drums has ever been executed in this scale.

ELI LILLY AND COMPANY—Booth 6

Eli Lilly and Company produced the first commercial preparation of Insulin, contributed to development of liver therapy, and has been responsible for many other therapeutic advancements. Products of importance in routine practice will be displayed.

H. G. FISCHER & COMPANY—Booth 23

H. G. Fischer & Company will display 1940 models of x-ray and short wave apparatus which are so distinctive that every physician should consider inspection a convention obligation. The complete H. G. Fischer & Company line includes shock-proof x-ray apparatus, short wave units, combination cabinets, galvanic and wave generators, ultra violet and infra-red lamps and many other units, accessories and supplies.

Physicians attending the convention are invited to ask for demonstrations of apparatus in which they are interested and to consult with FISCHER representative regarding technics made available by FISCHER APPARATUS.

C. B. FLEET COMPANY—Booth 43

PHOSPHO-SODA (FLEET), a saline laxative, has been presented to the Medical Profession for over fifty years. This eliminant is suggested when a rapid non-griping action is desired. It is recommended in gall bladder disorders.

The profession is cordially invited to visit the booth of the C. B. Fleet Company, Inc.

GENERAL ELECTRIC X-RAY CORPORATION—BOOTH 55

Each year the General Electric X-Ray Corporation endeavors to develop for the profession, new and better x-ray and electromedical apparatus.

A visit to the G-E exhibit will prove most helpful to you, whether you are planning for a new installation or the modernization of your present electromedical facilities.

GERBER PRODUCTS COMPANY—Booth 35

Ten new foods which have just been added to the Gerber Baby Foods, will be on display in the Gerber Booth.

Copies of both the professional literature and the booklets for mothers are there for your examination and will be sent to you upon request.

HAMILTON-SCHMIDT SURGICAL COMPANY—Booth 28

The Hamilton-Schmidt Surgical Company of St. Louis has an exhibit at this meeting of the Illinois State Medical Society to exhibit and demonstrate Burdick Physio-Therapy apparatus. They expect to show an interesting collection of genuine Stille stainless steel Swedish instruments. The new improved Safti-Flask of the Cutter Laboratory Dextrose solutions. You are invited to visit this exhibit.

THE G. F. HARVEY COMPANY—Booth 17

H. J. HEINZ COMPANY—Booth 39

Physicians interested in prescribing for the feeding—especially of infants, older children or adults requiring soft diets, will be interested in the new Heinz exhibit where Strained and Junior Foods are attractively displayed. Mr. J. P. Dermody is in attendance and will be happy to supply information on these foods.

The eighth edition of the popular Heinz Nutritional Charts, containing greatly expanded charts and new data on vitamin content of foods, is ready and will be mailed on request.

HORLICK'S MALTED MILK CORP.—Booth 11

Nourishing, digestible, appetizing—these are the three outstanding qualities for which HORLICK'S is famous, whether in powder or tablet form. Visit the exhibit booth. You will be interested in the many uses from infant feeding to old age—note especially the convenience of the Tablets in ulcer diets.

JONES METABOLISM EQUIPMENT CO.—Booth 5

The "Jones Metabolism Equipment Company" will feature

as their display, the Jones MOTOR BASAL Metabolism apparatus.

A special feature of this unit is that it contains no water, and requires no calculation in the determination of the basal metabolic.

"THE 'JUNKET' FOLKS"—Booth 52

"The 'JUNKET' FOLKS,' Chr. Hansen's Laboratory, Inc., Little Falls, N. Y. will exhibit at this year's annual meeting. Graduate dietitian in attendance at the exhibit. Free servings of rennet-custards made with "Junket" Rennet Powder and "Junket" Rennet Tablets.

Authoritative literature describes the action of rennet enzyme on milk and the place of rennet-custards in the diets of convalescents, post-operative cases, invalids, infants, children, etc. There will be a display of "Junket" Brand Food Products.

LEDERLE LABORATORIES, INC.—Booth 22

Lederle Laboratories, Inc. will display all types of specific Antipneumococcic Sera as well as Sulfapyridine and Sodium Sulfapyridine, the comparatively new drugs used in the treatment of pneumonia.

We will also present our line of Globulin Modified Antitoxins and pharmaceutical specialties with particular reference to the high potency of Vitamin B Complex and the Bellabulgara Tablets which are receiving such wide spread acceptance in the treatment of Parkinsonism. All physicians are extended a cordial invitation to visit the Lederle booth.

J. B. LIPPINCOTT COMPANY—Booth 8

Among the interesting Lippincott publications on display will be Kugelmass': "Newer Nutrition in Pediatric Practice" and Becker and Obermayer's: "Modern Dermatology and Syphilology." Of similar importance is "Functional Disorders of the Foot" by Dickson and Diveley which has gone into a second printing within five months of publication. Other interesting works include Thorek's: "Modern Surgical Technic," Rigler's: "Outline of Roentgen Diagnosis," Barborka's: "Treatment by Diet" and many others.

A. E. MALLARD—Booth "B"

M & R DIETETIC LABORATORIES, INC.—Booth—36

M & R Dietetic Laboratories, Inc., Columbus, Ohio, will display Similac and powdered SofKurd.

Representatives will be glad to discuss the merits and suggested application of these products.

MEAD JOHNSON & COMPANY—Booth 42

Mead Johnson & Company will exhibit several new products in addition to Dextri-Maltose, Pablum and Oleum Percomorphum.

They will also have on display various examples of their slogan "SERVAMUS FIDEM"—We Are Keeping the Faith.

MEDICAL ARTS SUPPLY COMPANY LEPEL HIGH FREQUENCY LABORATORIES, INC.,—Booth 30

The merchandise we expect to display will consist of one set of physician's examining furniture; three pieces of Lepel High Frequency apparatus; an infra red lamp; an ultra violet lamp; assorted surgical instruments and specialties.

THE MEDICAL PROTECTIVE COMPANY—Booth 27

The Medical Protective Company's representative, thoroughly trained in Professional Liability underwriting, invites you to visit our exhibit booth. He is entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship.

He will be glad to explain how his Company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

MELLIN'S FOOD COMPANY—Booth 40

Members of the Illinois State Medical Society are cordially invited to call at our booth for an exchange of ideas and opinions relative to the feeding of infants and in regard to the preparation of nourishment for adults requiring a restricted diet, particularly in view of the recognized importance of selecting food material best adapted to the individual requirements.

THE MENNEN COMPANY—Booth 16

The Mennen Company will exhibit their two baby products —Antiseptic Oil and Antiseptic Borated Powder. The Antiseptic Oil is now being used routinely by more than 90% of the hospitals that are important in maternity work.

Be sure to register at the Mennen exhibit and receive your kit containing demonstration sizes of their shaving and aftershave products; also, for the lucky number prize drawing to be held at the close of the convention, for DeLuxe Fitted Leather Toilet Kits.

THE C. V. MOSBY COMPANY—Booth 37

Doctors attending the Illinois State Medical Society are cordially invited to visit the Mosby Booth—there to inspect the new publications which will be on display.

Outstanding new volumes on surgery, allergy, dermatology, operative orthopaedics, nervous and mental diseases, heart diseases, x-ray, gynecology and obstetrics, materia medica, and practice of medicine will be shown. Browse through this new material at the Mosby Booth.

V. MUELLER & COMPANY—Booth 7

PARKE, DAVIS & COMPANY—Booth 2

Featured in the Parke, Davis exhibit will be the sex hormones, Theelin and Theelol; antisyphilitic agents, such as Mapharsen and Thio-Bismol; posterior lobe preparations, including Pituitrin, Pitocin and Pitressin; and various Adrenalin Chloride preparations.

PET MILK SALES CORPORATION—Booths 48 and 49

An actual working model of a milk condensing plant in miniature will be exhibited by the Pet Milk Company. This exhibit offers an opportunity to obtain information about the production of Irradiated Pet Milk and its uses in infant feeding and general dietary practice. Miniature Pet Milk cans will be given to each physician who visits the Pet Milk booths.

PETROLAGAR LABORATORIES, INC.—Booth 4

This year the Petrolagar Laboratories, Inc., will offer, in addition to samples of the Five Types of Petrolagar, an interesting selection of descriptive literature and anatomical charts.

Ask the Petrolagar representative to show you the new HABIT TIME booklet. It is a welcome aid for teaching bowel regularity to your patients.

PHILIP MORRIS & COMPANY, LTD, INC.—Booth 15

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes.

Their representatives will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

W. B. SAUNDERS COMPANY—Booth 1

This publishing house will exhibit a great number of new books and new editions in addition to their many excellent works.

Among the more important new books and new editions that will be of particular interest to those attending the convention are Walters & Snell's "Diseases of the Gallbladder,"

the New (1940) Mayo Clinic Volume, Christopher's "Minor Surgery," Penn Riddle's "Injection Treatments," Buckstein's "Clinical Roentgenology of the Alimentary Tract," Levines "Clinical Heart Disease," Ewing's "Neoplastic Diseases," Wilder's "Clinical Diabetes Mellitus and Hyperinsulinism," Hauser's "Diseases of the Foot," McLester's "Diet and Nutrition," and many standard works such as Bickham's "Operative Surgery," Warbasse-Smyth's "Surgical Treatment," the Medical and Surgical Clinics of North America, and many others.

SCHERING CORPORATION—Booth 62

Schering Corporation's representatives will be pleased to discuss latest developments in hormone therapy.

New products on display will be Cortate (desoxycorticosterone acetate), Anteron (gonadotropic hormone from mares' serum), Pranturon (gonadotropic hormone from pregnancy urine), Pranone (orally effective progestin), as well as the other well-known Schering preparations—Progynon-B, Progynon-DH, Proluton, Oreton and Neo-Iopax.

OTTO SCHWEINBERGER & COMPANY—Booth 57

A free gift will be presented to each and every doctor visiting the Otto Schweinberger & Company Booth in celebration of their 15th anniversary.

They will feature the new Dual Wave Liebel-Flarsheim short wave diathermy, the Dual Spectrum ultra-violet lamp and portable X-Ray, and the new Portable Bovie surgical unit. There will also be on display a complete line of surgical instruments and laboratory equipment including the Spencer microscope.

SHARP & DOHME, INC.—Booth 50

Sharp and Dohme will have their new modern display at their booth this year, featuring Propadrine Hydrochloride Products, "Lyovac" Bee Venom Solution, and other "Lyovac" Biologicals.

There will also be on display a group of new pharmaceutical specialties and biologicals prepared by this house, such as Rabellon, Daldrin, Padrophyll, Elixir Propadrine Hydrochloride, Riona, Depropanex and Ribothiron.

Capable, well-informed representatives will be on hand to welcome physicians and furnish information on Sharp & Dohme products.

S. M. A. CORPORATION—Booth 3

Among the technical exhibits at the meeting of the Illinois State Medical Society this year, is an interesting new display, which represents the selection of infant feeding and vitamin products of the S. M. A. Corporation.

Physicians who visit this exhibit may obtain complete information, as well as samples, of S. M. A. Powder and the special milk preparations—Protein S. M. A. (Acidulated), Alerdex and Hypo-Allergic Milk.

SMITH, KLINE & FRENCH LABORATORIES—Booth 9

Smith, Kline & French Laboratories, believing that many physicians dislike efforts to make them register, have arranged their booth for self-service.

Up-to-date information about "Benzedrine Inhaler," "Benzedrine Sulfate," "Benzedrine Solution," Pentnucleotide, Feosol Tablets and Elixir, Oxo-ate "B," Eskay's Neuro-Phosphates and "Paredrine Hydrobromide with Boric Acid Ophthalmic" may be obtained in convenient envelopes from literature dispensers.

If additional information and data is desired, the representative will be glad to answer any questions.

E. R. SQUIBB & SONS—Booth 47

Physicians attending the Illinois State Medical Society convention, are cordially invited to visit the Squibb Exhibit.

The complete line of Squibb Vitamin, Glandular, Arsenical and Biological Products and Specialties, as well as a number of interesting new items will be featured.

Well informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed.

STANDARD X-RAY COMPANY—Booth 34

The Standard X-Ray Company wishes to extend to the doctors in attendance at the Centennial Meeting a most cordial invitation to visit their exhibit in Booth No. 34. Here you will find on display the very latest type of shockproof equipment that is suitable for installation in a doctor's office.

Items will be shown that are exclusive to Standard, and will incorporate many features that will not be found on other equipment. These many improvements are the result of over thirty years experience in the manufacture of x-ray equipment.

FREDERICK STEARNS & COMPANY—Booth 38

Doctors are cordially invited to visit our atractive convention booth to view and discuss outstanding contributions to medical science developed in the Scientific Laboratories of Frederick Stearns & Company.

Our professional representatives will be pleased to supply all possible information on the use of such outstanding products as Neo-Synephrin Hydrochloride for intranasal use, Mucilose (flakes and granules) for bulk and lubrication, Insulin-Stearns, Gastric Mucin, Trimax and Sulfanilamide tablets. A complete line of Vitamin products will also be displayed.

SUTLIFF AND CASE COMPANY, INC.—Booth 13

The physician who is served by SUTLIFF & CASE finds approximately 1000 medicinal products from which to choose his weapons to fight disease and death.

In addition to ethical pharmaceutical products, modern physicians' supplies and sundries are stocked for the convenience of physician and surgeon.

The SUTLIFF & CASE COMPANY possesses a splendid record of service to, and cooperation with, the medical progress; this record having been built on a solid foundation of 57 years of PROGRESS WITH THE PROFESSION.

WHITE LABORATORIES, INC—Booth 41

White's Cod Liver Oil Concentrate will be presented for your consideration. At our booth you may obtain complete information concerning the entire field of cod liver oil concentration, with clinical data substantiating the efficiency of White's Liquid, Tablet and Capsule Concentrates.

Qualified representatives and descriptive literature, including reprints and excerpts from medical literature, will further direct attention to the contribution of White Laboratories in the Vitamin A and D field.

JOHN WYETH & BROTHER, INC.—Booth 56

John Wyeth & Brother, Inc., Philadelphia, cordially invites visitors to their booth. Among the speciaties to be exhibited are:

AMPHOJEL—Wyeth's Alumina gel for the management of Peptic ulcer and hyperacidity.

ALULOTION—Ammoniated Mercury with Kaolin for the more rapid healing of Impetigo Contagiosa.

BERPON—Wyeth's Beef Liver with Iron.

BEWON ELIXIR—The palatable appetite stimulant and vehicle.

KAOMAGMA—Wyeth's magma of alumina and kaolin for the control of diarrhea.

MUCARA—For intestinal stasis and

SULFUR FOAM—For the external application of Sulfur.

X-RAY EQUIPMENT COMPANY—Booth 54

THE ZEMMER COMPANY, INC.—Booth 51

The Zemmer Company extends a cordial invitation to every member of the Illinois State Medical Society to visit their exhibit where they will display a number of their leading pharmaceutical products.

ANNIVERSARY OF SYPHILIS IN WHITE MEN

A State Health Department release says: October 12, 1939, marked the 447th anniversary of the discovery of the New World by Columbus and, according to competent observers, a few days thereafter will mark the 447th anniversary of the first infection of white men with syphilis. Convincing evidence is presented by students of the disease that syphilis was first acquired by white men (at least during modern historical times) when members of Columbus' crew were infected from the natives of Haiti after landing on the first voyage.

Be that as it may, syphilis undoubtedly first appeared in recognizable form in Europe after the return of Columbus. In 1495 it was carried by Spanish mercenaries to the Army of Charles VIII of France when that monarch laid seige to Naples and from his heterogeneous army syphilis spread quickly in a devastating epidemic throughout Europe. It followed the intrepid explorers of that historic period along trade routes so that within 10 years it had appeared in every nation of the world.

Thus syphilis is about 4½ centuries old, so far as white man is concerned. It required more than 400 of those years for man to discover the exact cause of syphilis and still longer to develop effective weapons to combat it. The great events which now make possible the eradication of syphilis were as follows:

1. In 1905 Fritz Schaudinn discovered and proved that syphilis is caused by a living organism, a spirochete called Tre panema, pallida. This opened the way, only 34 years ago, for direct attack on the cause of the disease.

2. In 1906 Wassermann discovered the practicability and proved the reliability of testing blood to show whether or not an individual is infected, making possible the detection of practically all cases of syphilis.

3. In 1911, Erlich succeeded in preparing a drug, the famous 606, which will cure syphilis in the great majority of cases if used intelligently and soon enough.

These scientific discoveries, the details of which have been greatly improved, give man the upper hand against syphilis for the first time in a conflict that has raged for upwards of 400 years. On the anniversary of the beginning of that conflict, Illinois has more reported cases of syphilis than of any other notifiable disease (22,193 for the first nine months of 1939), but has organized the machinery and is prepared to go forward with an extensive and intensive offensive against the disease. Drugs are free for the treatment of any patient and blood specimens will be examined free, although doctors charge for their services in connection with both procedures. Literature about the disease is available free and motion pictures can be borrowed from the State Department of Public Health. Ten clinics supported by the State in various localities offer free treatment and examination of the poor, and experienced personnel are constantly at work to uncover cases and keep patients under treatment.

It is possible that within a decade or so Columbus Day might be celebrated as the anniversary of the triumph over a four centuries old enemy.

ANSWER YES OR NO

Now, Doctor, assuming that you are an American citizen, a resident taxpayer, and assuming that you are the legal possessor of a license to practice medicine and surgery, having duly completed the requirements of special education and training as prescribed by law, and assuming further that you have successfully passed the qualifying examinations required by the State of New York except in certain cases of foreigners desiring to practice here, and assuming further your legal right so to practice medicine and surgery except in Workmen's Compensation cases without further qualification, and assuming further that having duly made application in conformity with the revised Workmen's Compensation Act, and having been certified as to training and ability, character, morals, ethics and lack of convictions by the Commissioner of Labor, classified, symbolized and numbered, and assuming further that you are a member in good standing of your National, State and County medical societies, that you have duly completed your annual physicians' registration and payment of fees to the State, that you have duly paid the annual fee and fulfilled the registration requirements of the Harrison Narcotic Act, and assuming that you are familiar with all the Federal and State statutes governing the practice of medicine and surgery in your locality, and assuming that, having complied with all the local rules and regulations you are admitted to the privileges of your local hospital, and have fully paid your Staff dues and assessments, and assuming further that you have contributed to the benefit for the Nurses' Home, the Hospital Fund, the Policemen's Ball, and the Boy Scouts, and assuming further that the local Welfare Office uses you and the facilities of your private office only for an occasional emergency case at ridiculous rates, which cannot be sent (for some reason or other) to a free clinic, and assuming in addition that the school nurses send the children of your private patients to the free clinics, and that your former private patients now go to the Medical Centers because of the subsidized facilities, and assuming additionally that in spite of the free-choice-of-physician privilege under the revised Workmen's Compensation Act, the injured employees of your local industries do not choose for some reason to be treated by local and properly qualified physicians, although during periods of lay-off they have no reluctance in availing themselves of local welfare and local medical service in the clinics, and assuming also that you are aware of these conditions, would you be prepared to state whether, in your opinion, the present practice of medicine and surgery in the State of New York is cockeyed or not?—Lawrance D. Redway, M. D., in the *Westchester Medical Bulletin.*

SHAKESPEARE?

"Sign over a counter full of cheeses in a Chicago store: 'What Foods These Morsels Be!'"

Original Articles

SPONTANEOUS HEMORRHAGE AND THE METEOROLOGICAL ENVIRONMENT

WILLIAM F. PETERSEN, M. D.
CHICAGO

In a recent number of the ILLINOIS MEDICAL JOURNAL, Herndon has reported a series of six cases of "Spontaneous Subarachnoid Hemorrhage."[1] The term "spontaneous" is in many ways a misnomer because it must be obvious that every clinical episode of this character is to be related to some antecedent causal event. After all, clinical events—whether finding expression in changing symptomatology, in changing chemical or serological reaction, in changing nervous or mental state, in recovery or death—are energy effects, and we might logically seek an expanation of some of the more common "spontaneous" events in environmental alterations that might require undue autonomic adjustment.

In the region of the world which we inhabit, the major factor to which the human must adjust is the meteorological environment. It is the constant pendulation of the air mass from hot to cold and from cold to hot that causes greatest strain, because this necessitates a continual shifting of the blood mass from the periphery to the splanchnic region and from the splanchnic region to the periphery. Under the circumstances it might seem logical to seek the cause of "spontaneous" clinical episodes of the type that Herndon has reported in relatively simple weather changes. To illustrate this I have prepared small meteorograms to show the relation of the meteorological events to the clinical events delineated in the paper.

The first case concerned a woman, 47 years of age, who was disturbed early in the morning on August 9, 1931, by a noisy neighborhood party. Shortly after she complained of a terrible pain in the head and the neck and later vomited several times. A tentative diagnosis of epilepsy was made. In the afternoon of the following day she was drowsy, her blood pressure was 155/85 and she became worse on the 10th of the month but made a final recovery.

The meteorograms which have been prepared to illustrate these events simply show in the black field the maximal and minimal temperatures of the day, the lower curve indicates barometric pressure and at the date line the small black columns indicate precipitation.

When we examine the date indicated for the first case we note that the onset occurred with the beginning of a sharp change in temperature,[1] from a maximum of 100° F., until finally a minimum temperature of 55° F., was reached.

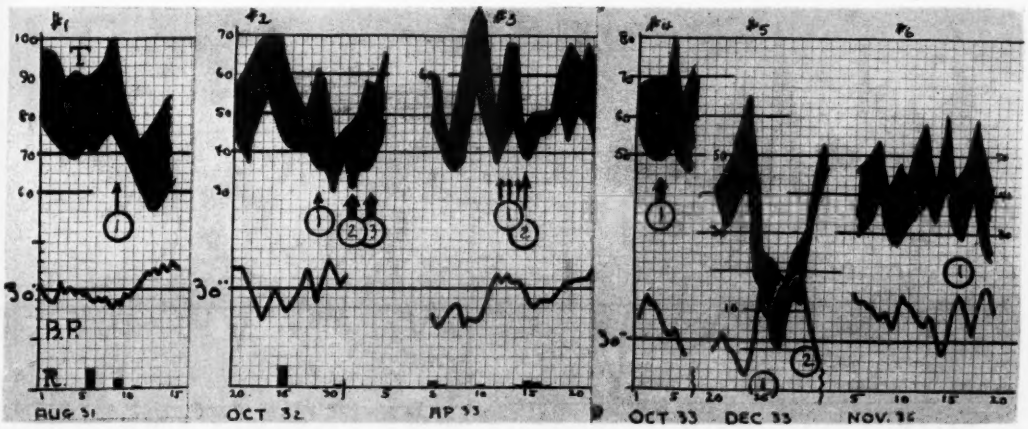

Figure 1. Meteorogram to Illustrate the Clinical Events in Dr. Herndon's Cases 1—6. The black field represents the daily maximum and minimum temperatures in Fahrenheit; the lower curve, the barometric pressure in inches; and the black columns over the date line, the precipitation. The circled numbers with arrows illustrate the onset of the clinical events described in the text.

The second case concerned a young girl who had bumped her head slightly on the night of October 28, 1932. This was immediately followed by a headache, nausea, vomiting, faintness and unconsciousness. She was admitted to the hospital on the 1st of November and on the 3rd of November her condition had not yet

From the Department of Pathology, Bacteriology and Public Health, University of Illinois College of Medicine, Chicago, Illinois.

improved; the urine contained glucose, acetone and diacetic acid. She ultimately made a complete recovery.

When we now examine the meteorogram for this period we note that the onset[1] occurred with the passage of a polar air mass (barometric pressure had commenced to increase, temperatures were beginning to fall). Hospital admission[2] occurred with lowest temperature. As an after-effect of the presumptive period of vascular spasm here involved, with its associated anoxia, the appearance of sugar, acetone and diacetic acid in the urine is recorded at.[3]

The third case concerned a syphilitic patient who was first seen on April 15, 1933, with a history that he had a severe headache for the three preceding days.

Again we note from the meteorogram that the onset of the headache[1] occurred with an unusually steep decline in temperature from the 80's to a minimum of 40 and the patient was finally observed by the physician[2] with the crest of the succeeding polar event. When we examine the meteorogram we note that the entire clinical episode occurred during a period of higher barometric pressure.

Case 4 concerned a miner, 43 years of age, who experienced sudden pain in both ears and became dizzy and vomited after blowing his nose very hard on the 3rd of October, 1933. Obviously this procedure would involve an increase in blood pressure, but this particular increase in blood pressure must have occurred at a time when the basal levels of the blood pressure were already high, because examination of the meterorogram

Here we note from the meteorogram that the development of the entire episode occurred with a severe cold wave, which reached zero Fahrenheit on the 26th of the month, at which time her headache was most severe. The accentuation of headache with the crest of the succeeding barometric episode on the 30th would represent an accentuation of the original physiological maladjustment. Note the associated crests of barometric pressure at the time.

Case 6 concerned a man who was found unconscious on the floor of his office on November 16, 1936. He was roused, vomited and complained of severe occipital headache.

An examination of the meteorogram indicates the occurrence of the episode with a polar crest, temperatures having declined sharply and barometric pressure being high.

SUBDURAL HEMATOMA IN INFANCY AND CHILDHOOD

Lest it be thought that these observations are not typical, I turn to a report on "Subdural Hematoma in Infancy and Childhood" by Drs. Ingraham and Heyl.

Their first case does not present dated episodes, but the *second* case concerned a boy, nine weeks of age, who was admitted on September 30,[2] 1937, because of vomiting, which began ten days previously.[1]

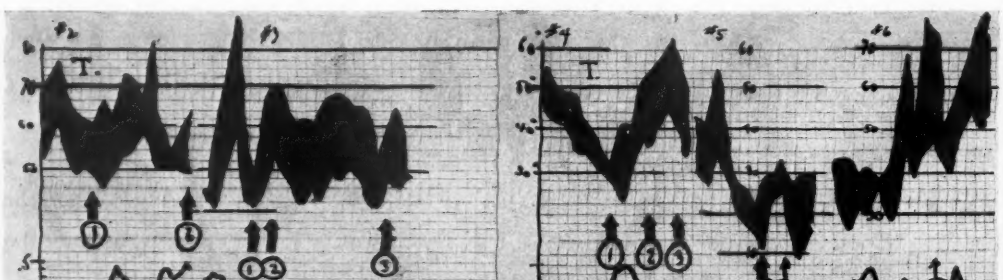

Figure 2. Meteorogram to Illustrate the Clinical Events in Cases Nos. 2, 3, 4, 5 and 6 of Drs. Ingraham and Heyl.

reveals the fact that on the 2nd of the month the barometric pressure had been unusually high. In other words, it would appear that we are dealing with a summation of two events that will be of significance in bringing about an unusual physiological situation.

Case 5 concerned an obese American housewife, who developed a severe headache on December 26, 1933, at which time she was unconscious for 15 minutes. She made some improvement but on the 30th of the month was again disturbed.

When we examine the meteorogram we note that the vomiting began with a polar front and the boy was admitted at the crest of the succeeding cold wave.

In the third case the record was that of a Negro girl, three months of age, who was admitted on May 14th[2] with a history of vomiting of two weeks' duration.[1] Twelve days before[2] entry she had generalized convulsions.

When we examine these episodes we note that the illness began with the sudden turndown of tmperature

from high levels (90° F.) to a low of approximately 40° F. The patient finally was admitted at a subsequent polar episode when a sharp turndown in temperature had occurred and with marked precipitation.

In Case 4 the record concerned a boy, eight months of age, who was admitted on November 29, 1937,[2] because of drowsiness and convulsions during the past week.[1] Three days[2] before admission internal strabismus had appeared.

When we examine the meteorogram we note that the entire episode is associated with a sharp fall in environmental temperature, the strabismus occurred with the succeeding polar front and the child is finally admitted with the next succeeding event with temperatures turndown from a high of 60° F.

Case 5 concerned a girl, nine months of age, who was admitted on January 14, 1938, because of twitching of the right arm of one hour's duration. She had fallen on January 12th[1] from a high chair to the floor bruising her right cheek and was restless during the night. Here we are obviously dealing with trauma as an associated factor, although we must consider the possibility that the accident itself was associated with a preceding illness because the child had bronchitis and otitis media with a temperature of 104° F. on the following day.

An examination of the meteorogram would indicate that the entire episode is also associated with a sharp fall in environmental temperature and the final episode[2] indicating localization, with twitching of the right arm and leg, occurred with the onset of the passage of a cold air mass.

Case 6 concerned a girl, four months of age, who was admitted on April 14, 1938, with a diagnosis of fever and convulsions of four hours' duration.[1]

Examination of the meteorogram of the time indicates the onset with a sharp turndown from high temperatures on the 13th, the episode occurring definitely with the onset of a polar front.

Case 7 concerned a boy, two months of age, who was admitted on October 10, 1937,[2] with a history of convulsions for the past three days.[1]

Note from the meteorogram that the convulsions began with the passage of a polar front and apparently were accentuated with the continued passage of the cold air mass.

In Case 8 the history concerned a boy, three months of age, who was admitted on March 14,[2] 1938, because of cyanotic spells and twitching of the right side for eight hours. One week before the onset[1] he was hit on the glabella with a bottle, without any immediate symptoms appearing.

Examination of the meteorogram indicates that trauma occurred at the crest of a barometric episode and the onset of the acute symptomatology is to be associated with a period when a cold air mass began to pass after the warm temperatures of the 13th and 14th. The barometric pressure had increased from the evening of the 13th.

Case 9 concerned a boy, 13 months of age, who was admitted on May 17, 1938[2] with a history of vomiting and apathy of seven days' duration.[1] He had fallen from a high chair to the floor three weeks before admission but at that time there was no clinical disturbances. Three days before admission[2] an internal strabismus had been noted.

Examination of the meteorogram would indicate the onset of the acute disturbance with the transition from high to lower temperatures and from low barometric pressure to high. The internal strabismus followed with the passage of the tropical front and hospitalization followed with the barometric crest.

Case 10 concerned a boy, three years of age, who was admitted on February 15, 1938 because of deafness of one month's duration. He had some trauma from infection in August, 1937. On the day of admission he had suddenly vomited three times[1]. The pulse rate was high (110).

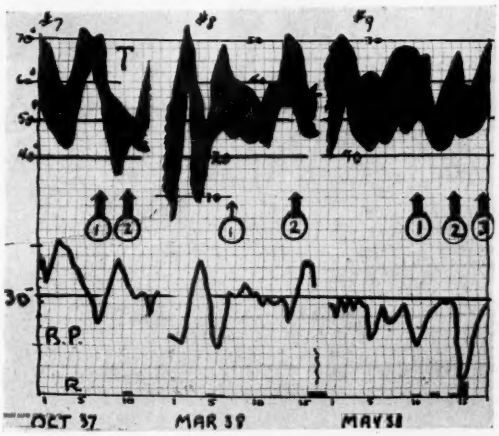

Figure 3. Meteorogram to Illustrate the Clinical Events in Cases Nos. 7, 8, and 9 of Drs. Ingraham and Heyl.

Examination of the meteorogram indicates the acute onset with the passage of a polar front.

Case 11 concerned a boy, 6½ years of age, who was admitted on June 17, 1937[2] because of headache of one month's duration. At that time he had fallen from a wagon and hit his head on the pavement. Eleven days before entry[1] vomiting and expistaxis began and have occurred since that time.

Examination of the meteorogram would indicate the onset occurring in the wake of a severe fall in temperatures early in June. The exact dating of episode[2] occurs with a secondary barometric crest after this major event. Actual admission to the hospital occurs with the next succeeding major barometric crest.

The case histories here selected merely indicate the significance of such relatively simple environmental alterations in the precipitation of clinical events such as hemorrhages here detailed. I should like to point out that all patho-physiological alterations which underlie changing symptomatology are conditioned by the meteorological environment in which the patient exists.

The integration is, however, not always the simple and direct one here in evidence.

With the passage of cold air mass the peripheral vascular bed is constricted, blood pressure rises, sugar is mobilized from the liver, a relative "sympathicotonia" obtains and under such circumstances vessels that are defective for any reason, such as preceding damage by arterio-

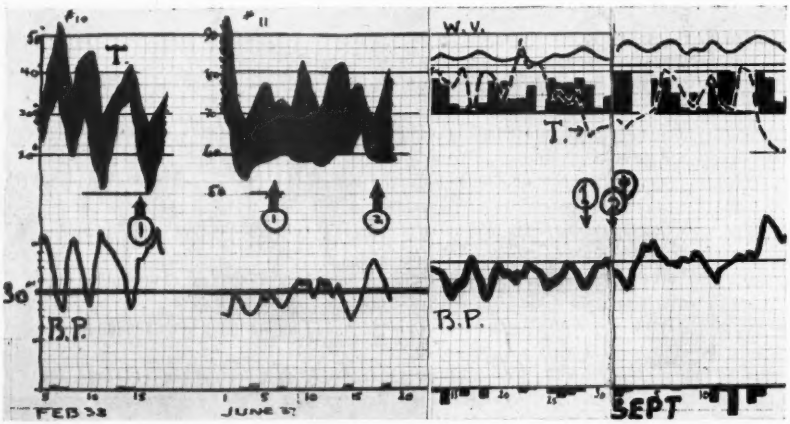

Figure 4. Meteorogram to Illustrate the Clinical Events in Cases Nos. 10 and 11 of Drs. Ingraham and Heyl.

Figure 5. Meteorogram to Illustrate the Clinical Events in Dr. Underhill's case of mesenteric vascular occlusion. The upper curve represents the wind velocity; the dotted line, the mean temperature; and the upper black field, the degree of cloudiness.

sclerosis, by trauma, by infection, are apt to rupture.

The phase of vascular constriction induced by any environmental cause is in turn followed by a phase when vascular beds are dilated, when vessel walls are sticky and adhesive, when the blood current is sluggish, when the trend to thrombosis is enhanced. Thrombosis therefore is not infrequently to be related to a preceding meteorological event; undue strain is put on the vascular system. We have merely to turn to another case report from a recent number of the ILLINOIS MEDICAL JOURNAL to illustrate the interrelation:

MESENTERIC VASCULAR OCCLUSION

Underhill has described a complete occlusion of the superior mesenteric artery with involvement of practically the entire small intestine in a patient, with the following history:

The patient was a white woman who had enjoyed good health until 7 o'clock in the morning of August 29, 1936[1] when she was awakened with a dull pain in the abdomen; some relief was obtained by a bowel movement, but at 8 A. M., the patient suffered severe epigastric pain, with nausea and vomiting.

Physical examination revealed an obese adult female who weighed 245 pounds. The temperature was 97° F., she was conscious, restless, complaining of excruciating pain in the abdomen. She entered the hospital immediately. On the morning of the third day the patient was improved. In the evening, however, at 9 P. M., the patient's pain again increased markedly and vomiting began[2]. At 8 P. M., of the fourth day an operation was carried out revealing a gangrenous small intestine from the beginning of the jejunum to within 15 cm. of the ileocecal valve. The patient regained consciousness and died the following morning at 7 o'clock.

In the meteorogram TF No. 5 is used to illustrate this episode the daily mean temperatures are indicated by the dotted lines, the wind velocity by the upper curve, the relative amount of cloudiness by the black columns.

When we examine this meteorogram, we note that the onset of the disturbance occurred at the end of a rather prolonged period of increasing cold, temperatures that had originally been in the 90's on the 22nd of August had declined to the sixties. With this phase of declining temperatures blood pressures would have been high. This would be followed by a characteristic decline in blood pressure and a trend toward thrombosis that would be associated with the phase of metabolic stimulation, relative acidosis, etc., normally following in the wake of the pressor episode. It is in this phase that the thrombus here involved must have formed. Then came a secondary increase in blood pressure, the change in vascular tone resulted in detachment, and embolism followed.

I have selected these few case records merely to illustrate the concept that the use of the term "spontaneous" is hardly justifiable until we have investigated more thoroughly some of the many environmental factors to which the human organism must adjust.

The normal individual has little difficulty in adjusting to the meteorological alterations to which we are subjected, but in the old and the young, in the damaged individual, or in the individual who, because of unusual liability of the autonomic nervous system, becomes unusually susceptible to meteorological changes, we must constantly refer back to the possibility that the clinical episodes which we witness may find their explanation in atmospheric alterations. The seat of the clinical disturbance may be observed in any tissue or any organ and the clinical expression may take the form of any type of dysfunction—whether hemorrhage or thrombosis, a diabetic coma, the sudden onset of an acute leukemia, or the sudden change in the mood of the psychotic patient.

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808 S. Wood St.

DISSOCIATED GENITALIA IN AN INGUINAL HERNIA: WITH DEFECT OF ONE TUBE AND OVARY

H. P. SLOAN, M. D., and
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The majority of authors agree that herniae of the female genitalia through the inguinal canal are usually unexpected in the adult, although more frequent and quite easily diagnosed in the child. Hewitt[1] in 1923 reviewed the 410 cases which had been presented up to that time and, in addition, presented one of his own, making a total of 411 cases. Sarnoff[2] in 1928 presented a case of prolapse of the uterus and tubes through a right inguinal hernia. In presenting his case Sarnoff stated "the condition of prolapse of the uterus to the right inguinal hernia is termed right inguinal hysterocele. Together with the prolapse of the tubes it might be termed right inguinal salpingohysterocele, a condition which is indeed very rare and interesting."

Forbes[3] in 1933 reviewed a number of cases of "ovarian anomalies:" congenital absence of one or more of the female genitalia; occurrence of a third ovary; and malformations of these and other organs. Comprehensive reference lists, given in the papers by Hewitt and Forbes, include no record of an anomaly to the extent found in the case considered in this paper: absence of right tube and ovary; prolapse of the left tube and ovary and infantile uterus through a right inguinal hernia; left ovary occurring between the tube and uterus with no apparent connection between the uterus and any pelvic organ.

CASE REPORT

The patient (K.V.) was first seen as a surgical case by one of the authors (H.P.S.) when her hernia became so painful that she was unable to carry on her duties in the home. Her previous medical history included whooping cough, measles, chickenpox and attacks of tonsillitis. The patient stated she was always strong and large for her age and had consulted a doctor for amenorrhea at the age of 16 but was told she would menstruate later. Patient claimed that although she has never menstruated, breast development started at the age of 11 and that since that time she has had all the symptoms of menstruation but no flow. Second-born in a family of twelve children, married at the age of 19, K. V. feels she has always had a normal libidinal response. No abnormalities were found in the family history.

Following tonsillectomy in 1930 the patient had influenza and secondary cystitis, albumen in her urine and considerable kidney trouble up to the time of examination. During this period she saw several different doctors at times when she was subject to periods of upset stomach and vomiting. Patient relates these occurrences with her hernia "coming out."

In 1936 K. V. entered the hospital in a uremic coma complicated with lobar pneumonia. Blood analysis showed, per 100 cc.: blood sugar, 110 mg.; non-protein nitrogen, 187 mg.; urea nitrogen, 84 mg.; creatinine, 15 mg.; uric acid, 18 mg. The urine was cloudy, straw colored, with acid reaction; specific gravity, 1,005 (average for a series of specimens); albumen ranged from two to four plus; sugar negative; acetone and diacetic acid were both three plus; bile negative. Microscopic examination: urine loaded with pus, many bacteria and few blood cells; methylene blue stained smear from centrifuged specimen of catheterized urine showed many clumpings of colon bacilli, four plus pus, epithelial cells and numerous red blood cells.

Cystoscopic examination (H.W.W.) after uremic coma and pneumonia had been controlled showed evidence of marked cystitis with several areas of ulceration. No residual urine, tumors or stones were seen. Capacity was slightly decreased. The urethra showed evidence of edema and thickening at internal orifices and

evidence of slight urethritis. Mucosa of bladder was markedly congested, edematous and ulcerations were present, especially at the region of the dilated and congested left orifice. The ureters were catheterized and no obstruction met. Retrograde pyelograms of both kidneys made on March 19, 1936 showed a large kidney shadow with pyelectasis (about grade 2) and a blunting of the calices together with a ureterectasis (about grade 2) in its entire length with a marked narrowing at the orifice. There were a few pus and blood cells in specimen obtained from both right and left kidneys. Kidney function test (intravenous injection of indigo-carmine) showed traces of the dye in 40 minutes from both right and left side.

After several weeks in the hospital the patient seemed improved and had no other complaints than weakness and fatigue with some constipation. She was allowed to return to her home under the care of her family physician who reported frequent flare-ups of her cystitis and complaints of backache.[1] She had frequent colds and, at times, conditions that were termed "flu," after which her urinary disturbance was more marked. She was up and about most of the time but unable to carry on the usual duties of a farm housewife. She adhered to a very restricted protein diet but had no unusual loss of weight and no other general physical disabilities.

In March, 1937, patient returned to the hospital with symptoms of recurrent pyelitis, following a bilateral otitis media. At this time catheterized specimen of urine showed two plus albumen and pus cell count of 75 per high power field, moderate number of bacteria of bacillus and coccus types, occasional epithelial and a few red blood cells. The blood contained 187 mg. nonprotein nitrogen per 100 cc. of blood. Methylene blue stained smear of urine showed clumps of colon bacilli, short chains of streptococci and many pus cells. Cystoscopic examination produced evidence of chronic cystitis with a few areas of ulceration. Right and left ureteral orifices were dilated with some edema. The ureters were catheterized and urine obtained from right and left kidneys contained many pus cells and showed evidence of a mixed infection with colon bacillus predominating. Faint traces of indigo-carmine given intravenously were returned after twenty minutes. The pelves of the kidneys were lavaged and after several intermittent repetitions of this procedure the patient was discharged from the hospital improved.

Physical examination January 3, 1938 showed a rather large strong woman, well nourished but slightly obese, aged 31 years, intelligence apparently normal, height five feet two inches and weight 158 pounds. The configuration of the body and distribution of pubic hair were normal for a female. Negative findings were found upon examination of eyes, ears, nose and throat, breasts, chest and heart. Speculum examination showed vulva and vagina normal but no hymen was distinguishable nor was any uterine or abdominal opening into the vagina found. On bimanual examination the uterus could not be palpated but a right direct inguinal hernia, the size of a silver dollar, with large sac, contained abdominal contents which could easily be replaced in the abdomen. Blood pressure was 136/80; pulse 84. Thyroid was normal. Gastro-intestinal findings were negative except for history of nausea and vomiting when hernia was out. Her reflexes were within the usual range. Wassermann was negative and total and differential blood counts were normal.

On January 4, 1938, patient entered the hospital and was again cystoscoped, preliminary to herniotomy. This examination showed some evidence of urethritis, less cystitis than formerly and a few remaining areas of ulceration, especially about the left orifice. The ureters were explored without obstruction and the urine samples from both right and left kidneys contained moderate amounts of pus with evidence of a mixed infection present, with the staphylococcus predominating. Traces of intravenous indigo-carmine were returned from both kidneys after twenty-two minutes. The blood contained 48 mg. non-protein nitrogen per 100 cc. The diagnosis at this time was a congenital chronic pyohydro-nephrosis with chronic cystitis. On January 7, 1938, she was again cystoscoped, without the insertion of the catheters, to recheck the kidney function by observing the appearance of the dye at the orifices Traces of the 10 cc. of indigo-carmine given intravenously appeared after twenty minutes.

Patient was operated upon January 14, 1938 under gas-induction anesthesia. Standard Bassini incision was made down to the sac. The lower edge of the sac was found attached to the uterus and upon raising the peritoneum outside of the abdomen, the uterus, left tube and ovary were easily brought through the opening. The uterus was infantile, firm, about the diameter of an index finger, approximately one inch in length and adjoined a very elongated, apparently normal left ovary (fig. 1). Distal to the ovary a normal appearing left tube was found. No direct connection could be seen between the tube and uterus. No open connection could be found between the utrus and vagina and any other organs within the pelvis. The round ligaments were attenuated and hard to distinguish. The appendix was protruded through the hernial opening and removed. The uterus was then removed in order to facilitate resection of the sac. Except for the abnormality of posi-

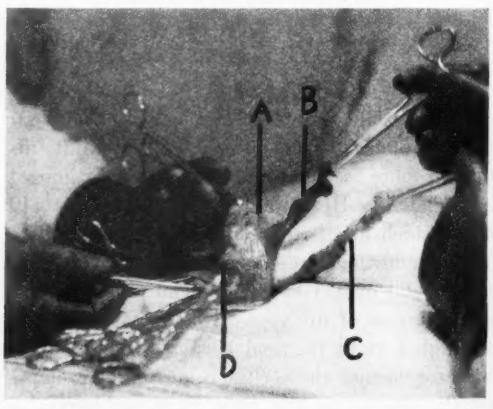

Figure 1. Operative field showing relationship between positions of: (A) Left ovary; (B) Left tube; (C) Appendix; (D) Uterus.

tion the ovary and tube were apparently normal and were replaced in the abdomen. The hernia was repaired and the abdomen closed according to the standard Bassini technique. The patient remained in the hospital for twenty days with no postoperative complications. During this time patient felt greatly relieved; her discomfort and nausea disappeared. After her return home patient continued through a normal convalescence.

July 28, 1938, the patients blood pressure was 132/78; pulse 80; physical examination negative. The Pfannensteil scar was a small white line, freely movable, and there was no pain or tenderness. The patient, (K. V.), stated that she was delighted with her results, that she no longer had any nausea or vomiting, and could work and have coitus without any pain although she was bothered occasionally by recurrences of her kidney condition. On February 23, 1939, the patient's blood pressure remained unchanged and her only complaint was that she occasionally had trouble with her kidneys; otherwise, she felt completely relieved of all other symptoms. Urine specimen contained a trace of albumen, many pus cells, and many bacilli in a stained smear. Complete blood examination was negative. Patient was put on mandellic acid.

In April, 1939, cystoscopic examination showed a moderate urethritis with some constriction of the orifice of the bladder and a moderately severe chronic cystitis with some edema of the mucous membrane. Some decrease in the capacity of the bladder was noted. However, there were no stones or ulcerations present and no diverticuli were seen. It was necessary to give the patient intravenous indigo-carmine in order to locate definitely the orifices of the ureters. The dye showed faintly after 50 minutes and by watching the points of excretion the orifices were located but, due to their constriction, a number 5, olive-tipped ureteral catheter could not be inserted, making it impossible to obtain a retrograde pyelogram. Intravenous pyelogram was procured, using 30 cc. of diodrast. Pictures were taken at the end of 20, 35 and 55 minutes. In the latter there could be distinguished very faint shadows of the pelves of the kidneys. None of the pictures taken at 20-minute intervals for the next two and one-half hours showed any definite outline of the pelves or the ureters, probably due to slow excretion of the dye. Catheterized specimen was cloudy, straw color and alkaline, having a specific gravity of 1,014, and containing a trace of albumen but no sugar. There were many leukocytes and lymphocytes present but no evidence of tubercular organisms.

The blood findings upon a morning fasting sample were: hemoglobin, 75 per cent.; red blood count, 4,990,000; white blood count, 8,850; polymorphonuclears, 69 per cent.; large mononuclears, 2 per cent; small mononuclears, 26 per cent.; eosinophiles, 2 per cent. Each 100 cc. of blood contained: sugar, 83 mg.; non-protein nitrogen, 28 mg.; urea nitrogen, 11.2 mg.; creatinine, 1.1 mg.

DISCUSSION

This patient provides us with an instance of a more extensive anomaly of the female urogenital system than has previously been reported. The abnormality of her female genitalia is unquestionably congenital. It certainly would seem that, due to the close relationship in embryological development of the urogenital system to the mesoderm and entoderm, the kidney involvement must have also had a congenital background. The absence of the right tube and ovary, together with the history of recurrent kidney dysfunction, indicate an incipiency occurring early in embryonic development.

Wharton[4] called attention to the fact that: "In making a clinical study of a case of congenital abnormality of the uterus, one must bear in mind that the genito-urinary organs have a common origin, and in their development are inseparably associated. Such malformations must, therefore, be studied from the viewpoint of the genito-urinary system as a whole." Environment, type of work, marital situation, etc., could, therefore, have had very little primary effect in this case. Had this patient been operated upon early in childhood she would have been spared a great deal of discomfort, but it is doubtful whether it would have influenced in any way the prognosis consequent to the kidney condition. Unquestionably, had this patient's financial circumstances been better, her tonsils would have been removed earlier, thereby eliminating any effect from this source upon her kidney condition. The hernia could have been diagnosed and repaired during childhood and before puberty, at which time it is quite certain that the hernia did not contain any of the genitalia.

The chronic pyohydronephrosis and contraction of the kidneys, causing lowered kidney function, is of long standing and the bladder condition, a chronic cystitis, is no doubt secondary to the kidney infection. The prognosis in this case is rather poor because as long as the infection exists the function of the kidneys will continue to decrease; therefore, any time following some general systemic infection or other disturbance she may have an anuria with a secondary uremia, as she has had several times in the past.

This condition seems, primarily, a congenital condition secondary to a congenital obstruction of the orifices of the ureters combined with a congenital condition at the orifice of the bladder. These congenital conditions at the orifices appear to have produced an obstruction, with back pressure, making the patient more susceptible to an

infection which was incurred early in life and has existed until the present time. Neither the medical history nor the laboratory and clinical findings have evidenced any marked hematuria. The bladder symptoms have not been sufficiently pronounced to indicate the presence of any tubercular condition in the upper urinary tract. If the hernia had been repaired before puberty and the case studied urologically some of these congenital conditions might have been corrected; the secondary infection with lowered kidney function might have been prevented and the patient been enabled to lead a normal life.

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ELECTROCARDIOGRAPHY AND CLINICAL PRACTICE

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The usual study of the heart includes a thorough history and physical examination of the patient, electrocardiographic record or records, x-ray findings of the heart and great vessels and routine Wassermann, complete blood count, and urine analysis. Fluoroscopy may be necessary in certain cases, for example, to determine the presence or absence of an aneurysm or to study the posterior surface of the heart, and many other tests, when indicated, are of value. Electrocardiography has become an integral part of the determination of functional disturbances of the heart, namely, the numerous arrhythmias, neural blocks, and conduction abnormalities.

At times a series of electrocardiograms are exceedingly helpful and may give valuable information which otherwise may not have been obtained from a single record. This is especially true in the differentiation between coronary sclerosis with angina pectoris and an atypical coronary accident, be it thrombosis, occlusion or embolus. It also may serve to differentiate between an active progressive cardiac lesion and a quiescent one.

Another recent addition[1] to the aid of electrocardiographic interpretation is the comparison of electrocardiograms before and after exercise. Latent conduction abnormalities, such as wandering of the origin of the pacemaker, occurrence of interauricular conduction disturbances, partial retardation of the conduction between auricle and ventricle, frequent appearances of extrasystoles and signs of myocardial involvement, have been brought out by this method. This is especially true of old rheumatic and diphtheric hearts.

An electrocardiogram is the record of electrical phenomena which occur primarily in the specialized tissue of the heart. However, skeletal muscular contractions, although sometimes present as artefacts, are not interpreted in an electrocardiogram. It is true that neural and muscular tissues are intimately intermingled and that, as a rule, damage to one system is associated with damage to the other. Nevertheless,

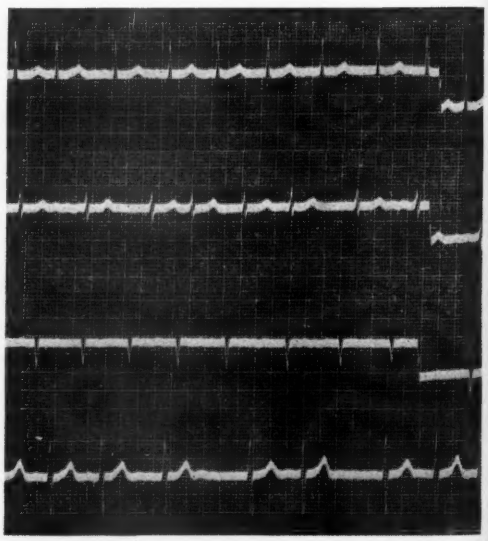

Figure 1. Case of Mr. E. P. W. Age 56 years. Auricular fibrillation of thirteen years duration. Left axis deviation. No other conduction abnormality.

the proportion of damage of the neural system on the one hand and the damage to the muscular system on the other is in many cases not balanced, sometimes markedy unbalanced. Valvular disease, if uncomplicated by muscular damages,

may show few or no electrocardiographic changes.

Since we interpret the neural changes when examining an electrocardiogram, it is rational to speak of different degrees of conduction abnormality rather than the often misleading terms of myocardial damage or myocardial degeneration.

The prognosis as to the heart itself depends primarily on the character of the myocardium, the strain which will be placed upon it, and the likelihood of future disorders of its makeup (vascular, muscular, valvular and neural). Therefore, the prognosis of a given individual which depends upon an electrocardiogram alone is inaccurate and many times in error.

There is found below a simple chart concerning several facts which are and should be of the utmost importance to any doctor who interprets electrocardiograms. This information should come from the physician requesting the electrocardiogram and be copied into each electrocardiographic record in a space for that purpose.

1. Age.
2. Height.
3. Weight.
4. Examination.
   - A. Routine.
   - B. Heart disease. Duration.
5. Amount of digitalis or other cardiac medication in the past three days.
6. Size of the heart.
   - A. Normal.
   - B. Slightly enlarged.
   - C. Moderately enlarged.
   - D. Markedly enlarged.
7. Blood pressure. Systolic. Diastolic.
8. Physician's diagnosis.
9. Physician's problem.

At the present time the individual's age usually is placed routinely on each record. Different standards or normals are found in different age groups, and disturbances which may be present in old age and be characterized as slight, may be characterized as moderate or severe in a young individual. Then, of course, certain disorders and diseases of the heart tend to fall into certain age groups; generally speaking, the congenital and rheumatic groups are usually found in children and young adults; the syphilitic, the hyperthyroid, and the malignant hypertensive groups are usually found in the middle aged in-

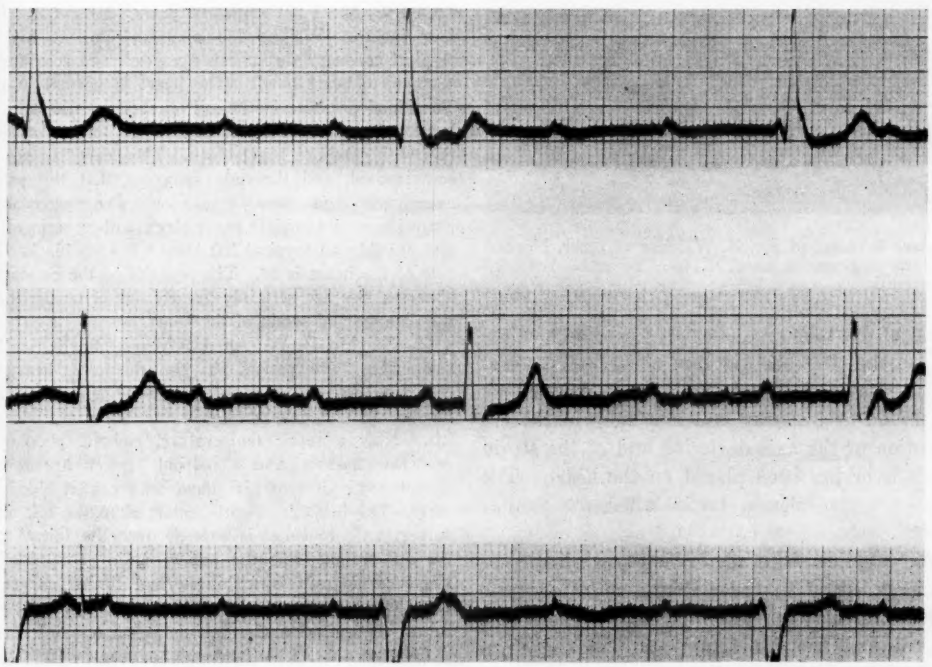

Figure 2. Case 2. Mr. F. L. Age 62 years. Complete heart block of six years duration. A typical left bundle branch block.

dividuals, and the arteriselerotic group with and without hypertension is found in the older group.

Height and weight are of value in the interpretation of normal and abnormal axis deviation. Short heavy people commonly show left axis deviation of slight or even moderate degree normally, whereas tall thin people may give slight right axis deviation normally.

Whether the electrocardiogram is routine or due to suspected or clinical heart disease is important, although great care must be used in interpretation in either case. The duration of the heart disease may guide us in correlating the electrocardiographic and clinical findings.

Cardiac medication is commonly added routinely to many electrocardiographic records; the

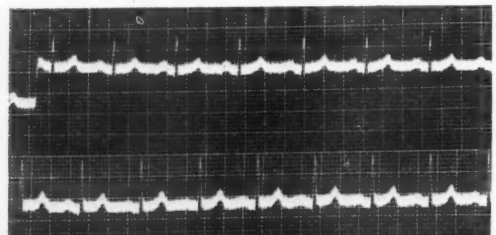

Figure 3. Case of Mr. R. W. Age 24 years. Normal electrocardiogram in case of late subacute bacterial endocarditis.

action of digitalis and associated cardiac medication on the electrocardiogram being well known.

The size of the heart may be determined by percussion or by x-ray and may help in the explanation of the axis deviation and of the strain which is or has been placed on the heart. The blood pressure should be included for similar reasons.

The physician's clinical diagnosis should be routinely added in order that a more accurate correlation may be accomplished between the clinical and the functional state of the myocardium.

Any additional aid, or facts confusing to the physician, should be added under the heading of the physician's problem. For example, if pregnancy is present, it should be so stated; if the patient is to undergo a major operation, or has some acute infectious disease or chronic ailment, a statement to that effect may be most helpful. This last column is extremely worthwhile and from it may be derived facts which may be of the utmost value in electrocardiographic interpretations.

These variations may be illustrated by the following cases:

Case 1. Mr. E. P. W. Aged 56 years. Height six feet, 6 inches. Weight 205 pounds. Patient has had permanent auricular fibrillation for thirteen years. The etiology is unknown. For the first two years this patient received digitalis and quinidine with no return to normal rhythm. No medication has been taken since this time. The heart is slightly enlarged. The blood pressure is within normal limits. The patient's heart has never been decompensated, and he carries on a normal, active and useful life. Serial electrocardiograms have showed no significant changes over a period of years. This electrocardiogram taken in 1937 shows auricular fibrillation with moderate left axis deviation and no other conduction abnormalities. This case tends to show that auricular fibrillation in itself is not serious and that the prognosis in a given case must depend primarily on the changes in the myocardium and the cardiac strain which is present.

Case 2. Mr. F. L. Aged 62 years. Height five feet, four inches. Weight 120 pounds. Patient had an atypical coronary thrombosis six years ago resulting in a complete heart block. The heart is normal in size. The blood pressure is 120 systolic and 30 diastolic, the large pulse pressure commonly being found in association with complete heart block. The heart has not decompensated, and the only symptom that the patient experiences is faintness on exertion. The electrocardiogram shows a complete heart block with a ratio of 3:1 and possibly an atypical left bundle branch block. The rate of the heart is 36. The severity of the conduction abnormalities are certainly greatly out of proportion to the damage and strain of the heart.

Case 3. Mr. R. W. Aged 24 years. Height five feet, two inches. The patient has had rheumatic heart disease with mild mitral regurgitation for ten years. Eight months ago he developed subacute bacterial endocarditis. Now a septic temperature, embolic phenomena, moderate anemia, and a palpable spleen are present. Streptococci viridans are found on repeated blood cultures. The heart is slightly enlarged to the left and a soft systolic murmur is present over the mitral area. At the present time the patient is in extremis. The electrocardiogram is within normal limits, except for the moderate sinus tachycardia. In spite of the mild mitral regurgitation, the axis deviation remains normal.

Case 4. Mr. J. W. Aged 55 years. Height five feet, six inches. Weight 190 pounds. The patient has a far advanced luetic aortic regurgitation of unknown

Figure 4. Case 4. Mr. J. W. Age 55 years. Far advanced case of syphilitic aortic regurgitation with only slight conduction abnormalities as probable evidence of coronary insufficiency.

duration. He has had many attacks of typical angina pectoris which is in all probability due to the narrowing of the coronary orifices. He has also experienced attacks of nocturnal dyspnea on occasion. His heart is markedly enlarged to the left and is of aortic contour. His heart has been decompensated on several occasions. The patient is maintained on three grains of digitalis daily, nitroglycerine grains one one-hundredth as necessary to relieve angina, and has had mercury and iodides in the past in the treatment of the syphilis. This individual clinically is moribund, but his electrocardiogram does not substantiate his history and physical findings. A few small changes which in themselves are not of serious import are present. Note the aberrant S. T. segments in leads one and two which is believed by some to be evidence of coronary disease and also the flattened T4 which may bear the same significance. It is interesting to notice that in this advanced case of aortic regurgitation normal axis deviation is present. This usually means that hypertrophy and dilatation of the right and the left ventricle are approximately the same. No evidence of aortic regurgitation as such is present on the electrocardiogram.

CONCLUSIONS

1. The routine addition of this simple chart to each electrocardiographic record would markedly increase the accuracy and value of a given electrocardiogram.

2. The interpretation of an electrocardiographic record is most useful when it is coordinated with the history and physical findings in a given case. Grave errors of underemphasis or overemphasis on a given electrocardiogram are liable to occur unless this coordination is made.

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PHLEBOCLYSIS EDEMA

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The use of saline phleboclysis is of tremendous help in the treatment of many conditions and, upon occasion, even life-saving. There are possibilities, however, of danger in its over-

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Deep appreciation is expressed to Dr. Bernard Fantus and Dr. Hans Popper for their hepful suggestions and instructive criticism.

use. This may be illustrated by the following case:

CASE REPORT

On November 14, 1938 there was admitted to the surgical service of the Cook County Hospital an obese colored woman of 48 years who for three months prior to admission had been suffering with pain in the right upper quadrant of her abdomen. Two weeks before entrance, constipation had become severe, and in the past week griping abdominal pains, obstipation with abdominal distention and vomiting, twice daily, had set in. On admission her temperature was 101°/R. On physical examination the abdomen was rounded, voluntarily rigid, distended, and peristaltic sounds were reduced with occasional periods of silence of from one to two minutes' duration and occasional borborygmi. The liver was enlarged. A mid-line suprapubic scar from a supracervical panhysterectomy in 1915 was present. On rectal examination green liquid stool was found. The impression was that of intestinal obstruction due to intestinal neoplasm, or possibly adhesions.

Fluoroscopic examination of the colon with barium revealed an obstruction at the rectosigmoid junction and multiple fluid levels in the colon. The urine examination was negative except for the presence of bile and urobilin. The hemoglobin was 65% and the white count was 9,800, mostly polymorphonuclear leukocytes. The blood Wassermann was negative; the icterus index showed only 7.0 units; the blood NPN was 35 mg.-% and the blood chloride was 280 mg.-%. The stool examination showed no blood.

The patient was given preoperative treatment for intestinal obstruction with Levine tube suction, intravenous fluids, mineral oil and enemas. She improved rapidly under this régime and the distention was relieved and the temperature dropped. In the first six days of her hospital stay she received a total of 16,000 cc. of intravenous fluids, mostly a mixture of 2.5% dextrose with 0.4% sodium chloride—or an average of 2,600 cc. daily. For the following six days she was fairly comfortable and required no parenteral fluids. Then the symptoms recurred, rather mildly, and she received 8,000 cc. of fluids intravenously and subcutaneously in the next five days. The symptoms again abated for another 2½ days after which there was another exacerbation and the distention suddenly became severe.

A Witzel type of ileostomy under local anesthesia was performed. There was no chance for exploration because of the marked distention. Drainage was good and in the next 2½ days she received 13,000 cc. of fluids, mostly 2.5% dextrose and 0.4% sodium chloride. She then began to cough and a generalized edema was first noted, not restricted to the dependent portion of the body. The lungs, also, were filled with fluid. A cardiac edema was ruled out clinically. The blood chemistry determination now showed an NPN of 45 mg.-%, a total protein of 4.75% with 4.25% serum albumin and 0.52% serum globulin or an albumin-globulin ratio of 8.2. The colloid, osmotic pressure was therefore 245 mm. calculated according to Farhas.

From this time on the fluid administration was restricted and except for a blood transfusion she received only 1,500 cc. of fluids in the last three days. Despite this she died on the fifth postoperative day, 25 days after admission and four months after the onset of symptoms. Altogether, in 25 days of hospitalization 39,000 cc. of parenteral fluids were administered. Actually, this amount was given in 14 days, since on 11 of her hospital days she received no fluids.

The postmortem examination revealed an annular constricting carcinoma of the splenic flexure of the colon with metastases to the liver and peripancreatic lymp nodes. A striking feature of the examination was the generalized edema of the body which was especially noticeable in the lungs, the abdominal wall and subcutaneous tissues especially in the lower extremities. Marked parenchymatous degeneration of the myocardium, liver and kidneys was also present. The kidneys weighed 340 Gm. together and were pale and rich in fluids. The enormously enlarged liver weighed 4,060 Gm. The edges were round. The parenchyma was softened. In it there were many umbilicated yellow white nodules of pinhead size up to 12 cm. in diameter. The periportal fields were edematous.

The liver section showed the liver cells to be granular and swollen and the sinusoids congested. Many of the liver cells were vacuolated. In general, the liver showed a marked serous hepatitis even in regions which were not in the vicinity of the metastatic tumor tissue.

On microscopic examination the kidney showed glomerular loops containing a normal amount of blood. The enlarged Bowman's spaces were filled with clotted proteins. The tubuli showed a sloudy swelling and their luminae contained an unusual amount of protein. No severe parenchymatous changes were noted histologically. The interstitial tissue was not swollen.

In addition to the carcinoma, the enormous intake of water was an important factor in the death of the patient. At the postmortem examination, the edema of the subcutaneous tissues and the parenchymatous organs was the most striking feature. The edema must be connected with the administration of the large amount of fluid.

DISCUSSION

Roessle[1] has shown that the intravenous injection of sodium chloride solution in large amounts to an experimental animal leads to a cloudy swelling of the liver and other parenchymatous organs. At times this may be severe, especially in the kidney. While in our patient there were other causes for a parenchymatous degeneration, it is felt that the increased fluid intake was an important factor. On the other hand, the classic experiments of Cohnheim and Lichtheim[2] have shown that in healthy animals, the mere injection of saline solution does not

produce edema.

Many other contributions in recent years have revealed the connection between hydremia and edema. Several possibilities can be mentioned. One factor may be the decrease of the colloid osmotic pressure of the blood due to the dilution of the plasma proteins. In the extravascular circulation of Starling with filtration and reabsorption in the capillaries, the reabsorption is affected by the colloid osmotic pressure. If in hydremia, the colloid osmotic pressure is lower, the reabsorption is diminished and fluid remains in the interstitial spaces. This explanation needs the demonstration of a low osmotic pressure which is mostly shown by a decrease of the albumin-globulin ratio (Foley, Keeton, Kendrick and Darling.[3]) In our case this explanation is not entirely sufficient, as the colloid osmotic pressure is not decreased and the reversal of the A/G ratio did not occur.

The second possibility is damage of the capillary wall as an important factor in the development of edema. If, due to an intoxication, the semipermeability of the capillaries suffers, protein escapes into the interstitial tissue with the filtrate fluid and prevents complete reabsorption (serous inflammation of Eppinger, Kaunitz and Popper[4]). The authors claim that sometimes in severe cases of capillary damage a large amount of globulin passes through the capillary membrane. This explains somewhat the protein deficit of the blood in our case, being chiefly due to a diminution of the globulin. The abundant administration of fluid and especially of hydrating sodium ions can easily explain the severe capillary damage—especially in combination with the intoxication due to the intestinal obstruction.

The changes of the parenchymatous cells are probably secondary to the serous inflammation and the increased concentration of sodium in the tissue fluid. The quoted studies have revealed that an edema fluid rich in proteins interferes with normal nutrition of the organ. Therefore, the permeability of the cells themselves is changed and sodium ions invade the cytoplasm, which normally is free of this ion (Hastings and Eichelberger[5]). Sodium within the cells effects hydration of the cytoplasm, causing intracellular edema or cloudy swelling. The chemical examination has shown the increased sodium content in the muscle tissue, which is due to an increase of intercellular fluid (McClure and Hinman[6]) and pathological presence of sodium within the cells.

CONCLUSION

The overuse of intravenous administration of fluid is therefore dangerous. In practice it may be sometimes difficult to determine the difference between the therapeutic and the pathologic doses. The problem is rendered even more difficult because of special problems involved in each particular patient.

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CARE OF THE SKIN IN THE NEW-BORN INFANT

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The sensitiveness of the skin of the new-born infant and its vigorous response to external factors such as mechanical and chemical irritation, thermal changes and bacterial injury is well known. A large part of the care the new-born infant receives in a hospital is therefore concerned with the prevention and treatment of skin irritations and infections.

Although luetic skin lesions and erysipelas are sometimes seen in the new-born, more commonly encountered are the non-specific disorders of the skin which may be put in one class and called neonatal dermatitis. This group of skin lesions consists of two main types. One variety may be called simple infantile dermatitis and includes such fairly well defined entities as intertrigo and erythematous macules and papules, the latter being sometimes known as "flea-bite" dermatitis of the new-born. The other variety may be called pustular dermatitis or pyodermatitis and embraces all vesicular and pustular lesions with or without exfoliation. In this group belongs impetigo or pemphigus neonatorum.

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The highly fatal but fortunately rare skin condition known as Ritter's disease or erythroderma exfoliativa neonatorum is in a class by itself. Some cases are associated with pustular and bullous lesions but in others no such lesions are seen. Ritter's disease is in many cases associated with a sepsis.

Heat rash consists of tiny vesicles, not pustules, on erythematous bases and thus is neither a simple infantile dermatitis nor a pustular dermatitis.

Although simple infantile dermatitis and heat rash are themselves very benign and cause little trouble they may predispose the skin to infection with resultant superimposed pustular formations. A certain percentage of new-born infants will, under the best conditions, have simple infantile dermatitis. Sanford has estimated the base level of nonspecific irritations to be around ten per cent.

Pustular dermatitis, while relatively benign and usually not serious in the individual baby, is epidemiologically of great importance because it spreads easily and may assume epidemic character in nurseries. Numerous epidemics of the condition have been observed in hospital nurseries.

The manner in which the skin is cared for has been greatly stressed and numerous routines have been tried in an attempt to prevent pustular dermatitis. There are three chief methods of taking care of the skin of the new-born. In one method, after the blood and vernix caseosa are wiped off, the skin is annointed with ammoniated mercury of varying strength. After this the baby gets daily baths with either water or oil. Mineral oil, olive oil, and commercial oils are most commonly used. Another method commonly employed is that of giving the baby an initial oil cleansing bath and thereafter daily oil or water baths.

Although the above two methods of caring for the skin of the new-born infant are of some value, neither of them have proven especially effective in preventing pustular dermatitis. In addition, ammoniated mercury has the disadvantage of not infrequently causing an irritation of itself and occasional cases of mercury poisoning with hematuria and tremors have been seen.

A third procedure which was first suggested about 1931 has attracted considerable attention and has been adopted in numerous hospitals. This is the procedure of not bathing the new-born infant at all during its hospital stay. In this method only the excess blood is gently wiped off after birth. The vernix caseosa is not removed and the baby's skin is not handled except in cleaning the buttocks with sterile water after the diaper is changed. This procedure was suggested because of the observation that in premature who are not bathed at all, the vernix is gone in twelve hours and the skin looks clean and red.

Since adopting this method some institutions have reported surprisingly few cases of impetigo. In a recent city-survey it was found that fifteen Chicago hospitals are not bathing the new-born infants. Some of these hospitals have nevertheless had cases of pustular dermatitis and in one institution the affliction was quite widespread. Thus, contrary to several reports in the literature, changing the hospital routine from bathing to not bathing has not, by itself, abolished pustular dermatitis in the new-born. The incidence of pustular dermatitis is, however, certainly no greater when the baby is not bathed than when ammoniated mercury is used. The routine of not bathing the newborn infant is to be recommended if for no other reasons than that the baby's skin is handled less, considerable nursing time is saved, and the nurses are better able to carry out other procedures, such as washing their hands between caring for babies.

More important perhaps than whether the baby is bathed or not, and what is used on the baby's skin, is the nursing technique and general management of the nursery and maternity divisions. No matter how the baby's skin is cared for, pustular dermatitis will invariably occur if a nursery is overcrowded, if there is insufficient or inadequately trained nursing personnel, especially at night, causing the nursing care to be haphazard, and if the rules of aseptic technique, especially the wearing of clean gowns, and the washing of hands before and after caring for each baby are not adhered to. If the nursery is not under the supervision of a competent individual who is responsible for the procedures used, breaks in aseptic technique are bound to occur.

Keeping the infants away from foci of infection is important. Any infant or mother with a purulent lesion or discharge should be isolated. The nursing personnel should confine their duties to the nursery itself and the "floating"

nurse should never enter the nursery. A number of epidemics have been traced to nurses who have handled new-born infants after having been in contact with patients having purulent discharges on the maternity floor or elsewhere.

Epidemics of pustular dermatitis have also been traced to skin lesions in the personnel such as paronychiae, furuncles, or acne and to upper respiratory infections. Other cases have been said to be due to similar infections in the mother and also to breast abscesses and even to visitors who have contaminated articles in the mother's room. It is therefore important to remove mothers with any infection from the maternity division and to limit and regulate visitors. If possible the visitors should don clean gowns before entering the mothers' rooms, should not have any direct contact with the mothers and should never come in contact with the new-born infants.

Contamination of any article which comes in contact with the new-born baby's skin may lead to dermatitis. The laundry may not be handled and sterilized properly or the last rinsing water may not be neutral. Diapers which have not been adequately rinsed are often irritating to the skin. On the other hand the laundry may be properly washed and sterilized yet the worker who takes care of the laundry last may contaminate it. Water, oil, or powder used on the baby's skin may harbor infective organisms and be a source of infection.

Some epidemics have been blamed on congenital pustular lesions, the significance of which was not recognized at birth and occasional cases are said to be due to the use of strong antiseptics on the maternal operative field or the obstetrician's gloves shortly before or during delivery.

Temperature and humidity control of the nursery is of some importance especially in preventing overheating, although some statistics do not bear out the idea that pustular dermatitis is more common in the summer.

The infecting agent in pustular dermatitis of the new-born is probably a staphylococcus although some workers blame a streptococcus and others are unable to find any organisms in the pustules. The baby may develop lesions at any time during its hospital stay and may even be born with lesions. The incubation period is vague and may be several days but often seems short, perhaps only 12-24 hours. The lesions are at first small red macules which rapidly become vesicular or bullous and in 12-48 hours the contents of the lesion are slightly turbid. They then shrink or rupture leaving moist red areas which heal without leaving any scars. There is no crusting or frank pus unless secondary infection is present. The lesions may occur anywhere on the body except the palms and soles although warm moist areas and the flexures are favored, and they may occur in successive crops on adjacent surfaces by autoinoculation. An individual lesion heals in about five days but the lesions may coalesce and there may be exfoliation. General symptoms are usually not prominent but in severe cases sepsis may coexist, there may be intercurrent infection, or the exfoliation may be so extensive as to simulate Ritter's disease. The site of the initial lesions may indicate the mode of infection. If it is on the exposed parts of the body nursing technique or handling of the baby may be faulty. If the covered parts of the body are first affected the laundry may be blamed.

The occurrence or suspicion of impetigo in a new-born in the city of Chicago necessitates immediate notification of the Board of Health and prompt isolation of the baby in a separate properly equipped nursery with separate nursing personnel using aseptic technique. The isolation must be prompt when the first pustule is seen and not be delayed until the pustules are numerous or other babies have become infected. The nurses who take care of the isolated infant must not handle the other infants or even go into the normal nursery. All articles must be disinfected or properly sterilized before they are taken out of the isolation nursery.

The baby is usually taken off the breast and the mother's milk expressed, preferably by hand. If the mother has a private nurse and is in a room by herself we can see no objection to her nursing the baby. In fact the best arrangement might possibly be to put the baby in the mother's room and have one nurse take care of just those two.

The source of the infection must be looked for. The nursery and maternity personnel including nurses, interns, non-professional personnel and the mother should be examined, and nose and throat cultures made. If found to have a possible focus the individual should be re-

moved from the maternity division. The doctor himself should make sure that he does not have some small lesion which he might have overlooked.

The laundry should be checked as to the manner of washing and handling and if there is any doubt as to the sterility of the linen it should be autoclaved. The laundry personnel, especially those handling the laundry after it has been washed and dried should be examined and nose and throat cultures made. All materials which come in contact with the baby's skin such as water, oil, powder and cotton must be cultured and if found to be contaminated, they should be discarded. Also, it is the duty of the nursery supervisor to check the entire nursing technique in the nursery to be sure the various procedures such as proper hand washing are being carried out. After doing all this the source of the infection may be found but not infrequently the search is fruitless.

If more than one case occurs at the same time or if there is a succession of several cases it is best to close the nursery and set up a clean nursery with other equipment and different personnel who have had complete physical examinations and nose and throat cultures. Any contacts in the contaminated nursery who develop pustular lesions are moved to the isolation nursery, otherwise they are sent home at the usual time or even earlier if possible. When the contaminated nursery is empty, all of the equipment in it is properly washed and sterilized. The room and such equipment that cannot be sterilized by autoclaving or boiling is washed and painted. The personnel is given a vacation for several days and the nursery then reopened in two or three days.

If the epidemic is severe or if new cases recur after the nursery is reopened it is best to temporarily close the whole maternity division. Then when all of the contacts have gone home the nursery and all of its equipment is cleaned as noted above before the maternity division is reopened.

In order to obtain a true insight into the extent of the epidemic it is necessary to check on all babies who had been discharged from the hospital during the time involved. Not infrequently a baby is discharged apparently normal but in the next few days may develop lesions. Where one case of pustular dermatitis is found in a nursery, checking back will often reveal that there have recently been other cases.

It must not be forgotten that where an epidemic of pustular dermatitis occurs in a nursery for the new-born, gastro-enteritis or epidemic diarrhea may be "around the corner." Not because there is any known etiologic relationship between the two, but because the same breaks in nursing care and aseptic technique which lead to pustular dermatitis also predispose to epidemic diarrhea and a personnel which is lax in some procedures is also probably lax in others.

The treatment of the individual case of pustular dermatitis is less important than the epidemological control since in most cases the lesions heal by themselves. There is no specific treatment and each physician has his own preference. A great many different agents are used. We might mention among others gentian violet, mercurochrome, metaphen, merthiolate, silver nitrate, alcohol, ammoniated mercury, mercury bichloride, calamine and ichthyol, boric acid, potassium, permanganate and collodion.

A good method is that of mopping up each lesion with a sterile applicator, then touching it with ten per cent silver nitrate and painting the whole area with one per cent aqueous gentian violet. The arms are splinted to prevent scratching and the areas are exposed to dry heat. A heat cradle or simple premature incubator is valuable; ultraviolet ray exposure may also be used. While there may be some objection to the use of medicaments which stain the skin and make the condition look worse than it is, our experience with gentian violet has been satisfactory.

The early recognition of pustular dermatitis in a nursery is of utmost importance. It is folly to wait for large pustules or bullae to develop before isolating the infant. Von Reuss emphasized that "pemphigus neonatorum is not a clinically uniform disease but a disease group with great variation in regards to size and variation of lesions, contagiousness and disease course."

One difficulty which has to be overcome is the reluctance of many hospital authorities to call a dermatitis impetigo, even though pustular lesions are present because a break in technique or poor nursing care is implied. This unwillingness or lethargy in the recognition of pustular dermatitis frequently leads to delay in proper isolation and thus increases the danger of an epidemic. The condition will crop up now and then even in the

best conducted hospitals but proper procedures plus constant vigilance will make epidemics of pustular dermatitis less frequent.

SUMMARY AND CONCLUSIONS

1. The term "pustular dermatitis of the newborn" is to be preferred over "impetigo" or "pemphigus neonatorum" because the lesions may vary in size, type, contagiousness, distribution and course.

2. Although not bathing the skin of the newborn infant may not by itself reduce the incidence of impetigo, it is the preferable procedure because the skin is handled less and there is a saving in materials and nursing time.

3. Aseptic technique and proper procedures both in the nursery and maternity division, plus prompt and adequate isolation are most important in lowering the incidence of pustular dermatitis and decreasing the number and severity of epidemics of this condition.

4. The rules of "Keep the baby away from infection" and "Keep infection away from the baby" as emphasized by Dr. Herman N. Bundesen are paramount.

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INDICATION FOR OFFICE TREATMENT IN RECTAL DISEASE

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In physics inertia is defined as that property of matter by which it tends to remain in an existing state of rest, or of motion in the same straight line, unless acted upon by an external force. In medicine inertia is the tendency of the medical profession to continue in the same course of diagnosis or treatment unless there is the application of some other idea or improvement in that course. Just as a heavy body continues at rest until forcibly started in motion, and then continues in motion unless forcibly stopped, so does the medical profession require a considerable force of opinion and experience to first adopt a new method, and an equally great force to prevent it from moving to extremes, and finally bring it to rest in a new position. This inherent conservativeness of the profession has much to commend it. It prevents the adoption of many new and untried changes that may be harmful. When adopted with enthusiasm it rapidly explores all the fields of usefulness. After a time there is a sensible evaluation of the method, the good is retained and the bad rejected. The total improvement over the original state is the actual progress.

The treatment of rectal diseases is a good example of medical inertia. From ancient times until the middle of the 19th century rectal diseases were considered almost as afflictions and were either totally ignored; treated by useless palliative measures; or were subjected to surgery that was so distressing to the patient that it could be considered radical. With the discovery of the injection treatment of hemorrhoids there was introduced an improvement in the existing methods of treatment that allowed many cases to be treated without operation. The new method was actively opposed by the medical profession at the start, but slowly the soundness of the method was recognized and it finally became a recognized procedure very generally used.

A treatment of hemorrhoids that was a simple office procedure was seized upon by some members of the profession who capitalized on it. They were further aided by the introduction of local anesthetic methods that could be easily used in the anal region. These two innovations were the basis for the school of so-called ambulant proctologists who undertook to treat rectal diseases solely in the office. The fact that they advertised their wares in an unprofessional manner led to their being ostracized by the profession in general. They were consequently denied the use of hospitals and soon were able to treat patients only in their offices. It then became necessary for them to convince patients that office treatment was much better than hospital methods, or they would soon have no patients.

More recently there has awakened in the medical profession a realization that rectal diseases had been neglected. There has been a greater interest in the treatment of rectal diseases, and

with it the proper evaluation of the office methods and hospital methods of treatment. We have now reached the stage where procedures are fairly well standardized and the indication for each established. It is well to review conditions where hospital treatment is necessary and where office treatment is sufficient.

Rectal cancer, extensive strictures and pelvirectal abscesses are examples of the group of cases that require profound anesthesia and extensive or radical surgery. In this group of cases it is generally admitted that hospitalization is the only course. The seriously ill patient with an acute exacerbation of an ulcerative colitis is an example of the type of case not requiring surgery who is also best hospitalized.

Office treatment measures are sufficient in the functional constipation cases, the chronic or quiescent colitis cases, injection treatment of internal hemorrhoids and minor surgery of the anal region that can be easily done under simple infiltration anesthesia. All of the diagnostic measures necessary in proctology—including the sigmoidoscopic examination, laboratory and x-ray examinations—can easily be done as office procedures.

Aside from these well defined groups there are many other conditions that can be treated as office procedures, or for which the patient can be hospitalized for a short time. Anorectal fistulae are examples of this group. In these cases, by the use of multiple stage operations under local anesthesia, sloughing pastes, and by the exercise of considerable ingenuity it is possible to bring about a cure without sending the patient to the hospital. The treatment often extends over a period of months and in some of the more difficult cases is never complete. These cases treated by a one-stage operation, are usually hospitalized less than a week and are again up and about in another week. The physician who has hospital facilities available will therefore recommend hospitalization in these cases. It is the opinion of the writer that hospitalization for a short period of time is preferable to make-shift office procedures in all of this group of cases that can be treated by either method.

Office treatment of rectal disease should be limited to the injection of simple internal hemorrhoids, the removal of skin tags, thrombotic hemorrhoids, anal fissures and ulcers. Pruritus ani, quiescent or chronic ulcerative colitis, syphilitic, gonorrheal and chancroidal lesions of the anal canal or rectum, functional constipation, irritable colon, and other medical conditions are also treated in the office. Rarely the poor general condition of the patient make hospitalization necessary. These cases make up the bulk of patients seen by the general practitioner and the proctologist. The remainder of the cases not requiring radical surgery are best treated in the hospital, where an operation under caudal, spinal or general anesthesia followed by a short period of hospitalization is the method of choice.

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SULFANILAMIDE IN DIPHTHERIA

Report of Cases

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The uses of sulfanilamide during the past few years has been manifold. One daily expects to see reports on new uses of the drug. It has been my good fortune to be in attendance during a diphtheria epidemic, and with or without additions noted make use of sulfanilamide. The few cases given will be abstracted briefly, giving only the salient points.

CASE REPORT

CASE 1. M.L. Nine-year white girl was admitted to hospital because of headache and sore throat, on November 6, 1938. Her temperature was 101.6 but she did not appear acutely ill. On November 7, a slight membrane on tonsil was noticed. Culture was taken and direct smear at this time showed diphtheria and streptococcus bacilli. Sulfanilamide gr. 5 q.i.d. was started.

On November 8 the membrane had spread over entire left tonsil. On November 9 there was a nosebleed and spread of membrane over both tonsils and uvula. Although the laboratory report had not been returned, and the odor was not typical of diphtheria, a clinical diagnosis of this disease was made. A skin test with antitoxin showed marked sensitivity. Desentization was begun, but before 1 cc. had been given marked urticaria and angioneurotic edema appeared. After several hours several small doses, counteracted by adrenalin, were given.

On the eve of November 10 the laboratory reported diphtheria bacilli in nose and throat. On November 11 an attempt was made to give the antitoxin subcutaneously with glucose and adrenalin. When about 150 cc. of a 500 cc. solution containing 20,000 units of antitoxin had been given the condition of edema and urticaria became so severe that the hypodermocylsis was discontinued. In all about 10,000 units were given to patient since onset of disease. However, patient's condition was

good, and she had an uneventful recovery except for a serum reaction on the 15th and 16th; and a gallop rythm on the 17th.

Cultures were repeatedly positive. Sulfanilamide had been given continuously from the 7th to 15th. She was discharged December 11 in good health, although her heart rate has been rapid since then.

CASE 2. J. M. This 15-year old white girl contracted diphtheria from case 1. On November 16th she complained of headache, fever and sore throat. On the 17th and 18th she had several nosebleeds. A nose and throat culture was positive for diphtheria. Sulfanilamide was started November 18, and continued until November 26. There was an uneventful recovery.

CASE 3. R. Y. A colored male, aged 9, entered the hospital December 26, complaining of sore throat, pain in abdomen and emesis. Temperature was 98.8, P. 80, R. 20.

On physical examination throat was injected; no membrane was visible, however. Patient was put on sulfanilamide. On December 27 temperature rose to 103.8 and several white patches were seen on tonsils. Abdomen was distended but no marked tenderness or rigidity was noticed. There was a spread of the membrane to cover both tonsils and uvula. Temperature was septic in nature. Abdominal pain was quite severe throughout. On December 31, five days after entrance, temperature began to fall, patient felt better and throat began clearing. On January 2 the temperature was normal and child made an uneventful recovery.

Sulfanilamide was given until January 2, q.i.d., then b.i.d until January 6 before being discontinued. He was discharged January 15 as recovered.

DISCUSSION

The above cases are of interest because a new use for sulfanilamide appears to be indicated. Before proceeding, let me state that in cases of carriers I have been unsuccessful in the use of the drug. In all, six cases of clinical diphtheria, as evidenced by repeated laboratory reports and physical examinations, were treated with sulfanilamide with full recovery in all. One of these had not over 10,000 units of antitoxin. In my contagious experience this amount is not sufficient for treatment in the usual case. Assuming this to be the case, the other five were typical and had no antitoxin. It is also of interest that all three cases cited above had positive Shick tests before and after recovery.

The method of administering the drug is similar to that used routinely in my practice, namely, one five-grain tablet four times daily until temperature falls, then reduce amount by half for several days, then usually either discontinue drug or give one tablet daily for several days.

The question of failure of carriers to respond to the drug is an interesting one. This failure may be explained on theory, that has apparently been proven, that sulfanilamide only inhibits, but does not kill the growth of the organism. This apparently holds true for the streptococcus also, as shown by Hoyne and Bailey.[1]

Whether sulfanilamide is really of value in diphtheria can only be determined by passing of time. In a contagious hospital and given an early case, the drug can be used safely and without danger to the life of the patient. I would hesitate at this date to use it in a severe case unless some such situation again arises as did in case one. In that case the difficulty in administering the antitoxin was so great that in 36 hours not over 10,000 units had been given. It is unusual for signs of reaction to occur so rapidly during desentization.

CONCLUSION

1. Six cases of diphtheria were treated with sulfanilamide with recovery in each.
2. Diphtheria carriers are not affected by sulfanilamide.
3. The Schick reaction is unaffected by the drug.

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THE NERVOUS SYSTEM AND THE ALLERGIC

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Many theories have been presented to explain the mechanism of allergy, none of which are completely satisfactory.

Vagatonia or vago-sympathetic dystonia has always been considered a factor in the allergic; in fact, the entire nervous system is intimately connected with the mechanism of allergic response.

Allergic conditions are more frequent in the United States than in the European countries and not so pronounced in the colored race.

Ratner,[1] in the study of a large group of allergic and normal children, was unable to find a greater incidence of allergy in the families of the allergic group; he believes that the development of sensitiveness is due to a chance occurrence of certain factors and not to a hereditary mechanism.

In all other diseases there are two main etiologic factors, namely, the intrinsic and the extrinsic. The extrinsic factors act as irritants directly upon the tissues and indirectly upon the nervous system, producing an unstable or disordered condition of the vasomotors, and very frequently does not respond with symptoms as described in the allergic. For example, a person sensitive to eggs at certain times will not react at other times when eggs are ingested.

The same may hold true in pollinosis, as there are many days during the hay-fever season when the pollen count is high, and the patient has little or no symptoms; at other times the pollen count may be very low, and the patient suffers intensely.

Interesting experiments have been recorded by Dr. Rowe of California where he describes a number of cases in which food-sensitive individuals could eat certain foods in a certain locality without noticing any local or systemic reaction and becoming severely ill if the same foods were consumed in a different locality. The intrinsic factors act directly upon the nervous system, which is frequently responsible in many cases for hypersensitiveness.

Salter,[2] in his works, maintains that the nervous system is the seat of the essential pathologic lesion, contending that symptoms depend on spastic contraction of the bronchial muscles which is of excitomotor or reflex origin, and that the extent of involvement differs in every case. In some it is restricted to the nervous system of the air passages, and in others to the gastric or pulmonary portion of the vagus. The source of irritation, in some cases, may be in the brain, and in others may be of humoral origin.

A great number of allergists believe that the allergic state is essentially a neurosis consisting of a disordered or unstable nervous system. That the nervous and psychic stimuli have an influence in allergic conditions is quite generally accepted.

In recent years due to the interest in psychoneurotic problems, an attempt has been made to ascribe the onset of asthma, urticaria, or other allergic conditions to such psychic factors as fear, anxiety, anger and other emotional states. Numerous cases have been reported in which the cause was attributed to psychic stimuli. Psychotherapy, including removal of the psychic stimuli by hypnotic suggestion, was followed by relief or cessation of the allergic attacks.

In one of the earliest writings by S. Freud[3] the relations of the ego and the outer world are discussed, and many psychoses are presented in relationship with a disturbance of that same ego. He discusses at length the psychoneurotic mechanism in asthma. These ideas are now the common possession of mankind.

Otto Fennichel[4] gives a concise discussion of the influence of respiration on emotional behavior and vice versa. He gives a number of examples in which he establishes the fact that bronchial asthma is nothing but a psychosomatic affection. Freida Reichman,[5] in her article on psychopathology of bronchial asthma, gives proof that bronchial asthma is a neurosis of the respiratory organs of an otherwise psychopathic individual, who, besides his respiratory symptoms, invariably shows other psychopathological signs. It is quite characteristic of asthmatics to show swings of mood ranging between hypomaniac, downright depressive, or melancholy states. Many psychoanalysts agree that the psychic concept underlying asthma is merely a theoretical construction, because up to the present time psychic processes cannot yet be understood from research in brain physiology, and yet internists like Professors Strumpel, Eppinger and Hess, in their respective textbooks, regard asthma as a nervous disorder—even as a syndrome of anaphylaxis; by this they delegate the phenomena into the realm of unknown causes, which may lead to frequent respiratory disturbances.

Erwin Moos[6] is convinced that the psyche is nearly always the first-hand factor in respiratory diathesis. He treated sixteen cases by strict psychotherapy after many methods had been used in vain. Following this treatment he noticed that eosinophiles disappeared from the blood and sputum. The asthma spirals and crystals were also no longer seen and did not reappear, even after exposure to the specific allergen. Many cases of other authors are cited in which psychoanalysis was used with very good results, terminating in amnesia of the underlying psychic trauma.

Dr. Peterson at the University of Illinois in his book, "Weather and the Man," states that the nervous system is subject to weather changes and will precipitate many diseases of which no etiological factors can be found.

Rappaport, Nelson and Welker in 1935 reported that seven patients with pollen asthma in a pollen-free room experienced an epidemic of asthma on a day in which there were sudden weather changes, but in which there was no increase in the exposure of pollen.

Osler[7] maintained that bronchial asthma is a neurotic affection, and for many years in the various editions, neurosis was considered an etiological factor; in the chapter on psychical causes he states that anxiety neurosis or emotional disturbances play some part in producing attacks of asthma.

Clarkson[8] emphasizes that a potentially allergic child is born with both a psychic and somatic handicap. Such a child becomes either an egocentric or an overly receptive adult with a predisposition to react to all types of stimuli.

It has been reported that tension decreases the expiratory quotient. There is a distinct respiratory curve during the proces of seeing, recognizing and naming objects. Truth and falsehood have distinct respiratory symptoms. Pleasure, pain, anger, disgust, wonder, fear, laughter and hatred produce changes in respiration, and under hypnosis the respiratory activity can be influenced by suggestion. This was demonstrated on a young girl, aged 18 years, who gave a severe reaction to intradermal tests to egg whites. A wheal, one inch in diameter, surrounded by a raised erythematous zone three and one-half inches in diameter developed around the site of the injection. The next day the test was repeated when the patient was deeply hypnotized, and it was suggested that no reaction would occur. The patient was completely under hypnosis for one and one-half hours and suggestions frequently repeated; no reaction occurred. The next day the test was made in the normal state of the patient, and the original reaction was obtained.

Costello[9] describes a child with no family history of epilepsy who began to suffer from asthma at the age of ten and epilepsy began at the same time. Attacks occurred always at the end of an asthma paroxysm. As the asthmatic attacks increased, the epilepsy became more frequent and when the asthma improved the epilepsy disappeared.

Rogerson[10] has made a detailed study of thirty cases of asthma and eczema at Guy's Hospital in England. He discusses the psychologic makeup and nervous factors in allergic children, whom he finds sensitive, apprehensive, and with family hereditary inhibitions of emotional stimuli.

Todd[11] finds that nervous tension, distractibility, restlessness and short attention span together with irritability, whining and proneness to fatigue. He also describes the allergic child as one who is over-active, intensely excitable, and egocentric in his makeup.

Credille[12] maintains that more emphasis should be placed on the importance of fatigue in certain allergic diseases which has been instrumental in precipitating the initial asthmatic attack. Prolonged rest has been found a valuable adjunct to the conventional forms in the treatment of asthma.

Catherine MacInnis[13] made a survey of more than seven thousand phychiatric patients and found one-half of one per cent. of these patients to be allergic. The allergic symptoms became worse upon the approach to mental balance.

Clarkson[14] in an analysis of the nervous factor in juvenile asthma makes the observation that the following features, in varying degrees are common in every case: intensification of emotions, disordered biochemistry, habituation reflex (grouped around fear), escape from reality, and an expression of a definite psychosis.

He describes the case of a little girl who had fallen asleep with asthma symptoms unchecked. The author quietly stole up and kept whispering suggestions to the effect that the asthma would disappear, and in ten minutes the attack ceased.

Rogerson[17] reports, following an initial study of twelve children suffering from asthma in whom the importance of psychologic factors was evident, that the personality likeness of many of these cases was so striking, one began to speak of asthma personality, in which a high intelligence and an underlined aggressiveness were combined with over-anxiety and insecurity. The individual attack of asthma depends on the state of tension. As the tension is removed the patient may withstand such a stimulus without developing an asthma attack. In conclusion he emphasizes that psychologic treatment is in some cases able to prevent attacks completely, and in some instances it is able to assist the known physical remedies.

At King's College, University of London, in an intensive study of the psychologic factors in twenty-five cases of asthma and asthma pru-

rigo it was found that much can be done from that angle. The impression gained is that psychologic factors might lower the threshold for stimuli ordinarily producing an attack; with psychotherapy, they believe that it has as much to offer as any other average method of treatment.

E. B. Strauss, Guy's Hospital, London, England,[18] studied thirty-seven unselected cases of adults with asthma in regard to nervous, psychic or emotional factors; it was found that such factors definitely played a part in twenty-five of these patients.

Jollowicki[20] describes a boy, sixteen years old, who had frequent attacks of asthma. Examination revealed a close maternal attachment. The asthma attacks were cured only when the boy went to college and had affairs with women.

A similar case is that of a boy, thirteen years old, who had attacks of asthma only on Saturday and Sunday, and whose trouble was traced to the influence of a psychoneurotic mother.

Obendorf[21] cites in great detail a case of apparent asthma in a young woman who had a neurotic family background and environment. Significant points in the history were a neurotic bedridden mother, a socially unsuccessful father, and an incompatible husband, who also had hayfever. The author thinks that the asthma is a manifestation of a conflict concerning admission and reception, domination and submission, unconscious masculinity and conscious femininity.

H. Handa[22] claims that bronchial asthma is a vagus neurosis of the responsive organs. He explains the action of epinephrine and ephedrine as that causing an increasing tonus of the sympathetic nerves, thus overcominng the excess of vagatonia.

Freudenberg[23] claims that among asthmatic children one may frequently observe those with a marked inferiority complex and a desire for recognition and attention. The author cited a case of a boy, eleven years old, who had asthma attacks since he was three years old. He was sent to a health resort, where he was free from attacks but relapsed as soon as he came home. His asthma became much worse since the birth of a sister. The author thinks he uses his attacks as a means of centering the others' attention upon himself.

Clarkson,[24] in a recent article, states that he studied three hundred cases of asthma seen in private practice and discussed the nervous factor in 187 cases, in which the ages ranged from two to twenty years. He found that the psychologic element was present in almost every case, the factor governing it being the nature of inheritance and environment. Even before the allergic state is manifested the allergic child is over-sensitive and apprehensive. In them the emotional stimuli is a diffuse wavy radiation for which the normal reciprocal is faulty. The resultant loss of localization of stimuli, together with failure of adaptation enhances a potential overflow for asthma to make its first appearance. A purely psychic cause for the onset of asthmatic attacks was present in 2 per cent. of cases.

That allergy enhances the already existing psychic disturbance is shown by the change in behavior, both before the individual attacks develop and after appearance. Taking the Prausnitz-Kustner reaction is proof of the presence in the circulation of sensitization substances apparently capable of producing gross psychologic disorders. He cites an instance in which by hypnosis he caused a negative reaction on intradermic tests to eggs to develop in a patient who previously and subsequently gave a marked positive reaction to eggs.

Once asthma is developed, all the characteristics of a conditioned reflex are acquired, and now a memory of a previous attack is sufficient stimulus to precipitate another attack. For example, recalling an emotional disturbance, the suggestion of artificial flavors or a distended stomach may all be the provocative factors in a sensitized individual and the basis of a conditioned reflex which may result in a purposive simulation, hysterical habituation, or voluntary reinforcement of asthma, a stage may be reached where the allergic "catalysts" are no longer needed for asthma to develop, and the habituation reflex may be used independently of its allergic origin; it is important therefore to consider the social and environmental maladjustments.

PSYCHOGENIC ILLUSTRATIVE CASES

A white male, aged 72, complaining of bronchial asthma for the past fifteen years, has been under the care of many physicians with no relief. The only relief obtained was from the use of hypodermic injections of adrenalin. His family history was essentially negative, and he gave no reaction to the intradermal tests. On consultation I advised him to spend a week

at the hospital to break all possible contacts in his home environment. He agreed to go but insisted upon taking a hypodermic injection of adrenalin before we started, although at that particular time he was free from asthma. The hospital being only a few blocks away I assured him there was no cause for alarm. On the way he developed a very severe attack and became cyanosed. When we got him to the hospital, it required the help of two attendants to remove him from the car. We gave him adrenalin intracutaneously, also inhalations of oxygen and helium gas for a period of two hours, after which time he made a complete recovery; during his stay at the hospital he was perfectly free from attacks. He then decided to go home for one day, and insisted upon taking adrenalin with him; when his request was denied, he developed a very severe attack, became cyanosed, with cold perspiration, and required the use of adrenalin. From the information gathered since he has been using adrenalin on the average of one cc. per hour for the last two months.

A white female, aged 27, states that her asthma began at the age of twenty-one. Her attacks came on daily at about 6:30 P. M. and lasted usually until midnight; she remained perfectly free for the balance of the night and next day. Her family history is negative. She graduated from high school at the age of seventeen; was very active, enjoyed sports such as horseback, tennis, golf and swimming. Being the only child of her parents she was spoiled to the extent that her parents had no control over her. At the age of eighteen she married a man many years her senior. Unfortunately she or her husband were sterile, and not being able to give birth to a child she considered her marriage a failure. Following an explanation of the etiological factors in cases of sterility and assuring her that the future may bring about pregnancies her attacks completely ceased for a period of four months. She then obtained information from a gynecologist as to her physical condition and was informed that her chance for pregnancy was remote due to an infantile uterus; from then on her attacks became very severe and could not be controlled. The only reason for the attacks coming on at 6:30 P. M. responds to the usual time of her husband's arrival at home.

A white female, aged 19, complains of a chronic bronchial asthma for the past twelve years. Her attacks were much worse at night and usually of a severe character, lasting several hours. She is inclined to be very nervous and emotional. Her home life has been very difficult; she cries at the slightest provocation. Her family history is that of her mother having had bronchial asthma for many years, otherwise the family history is essentially negative. To skin tests she gave a positive to dust only, for which she has been treated for four months with freedom from attacks. She was married and remained well for a period of two weeks when she suddenly became progressively worse. From the history obtained it was revealed that her sexual life was not normal. Having properly advised her, she returned a month later stating that she was perfectly free from asthma and has been for the past year, although our methods of treatment were not altered.

A white female, aged 37, began with asthma at the age of twenty-two following a very severe cold in the winter. Her attacks were severe and mostly after going to bed. Family history of definite allergic character. To skin tests she reacted to pollen and dust for which she has been treated with excellent results. Her husband is a traveling salesman, and on the road most of the time; on six different occasions prior to her husband's arrival she would develop very severe attacks of asthma which lasted from 24-48 hours. These attacks would cease upon her husband's arrival and she remained perfectly free until the next coincidence.

A white female child, aged eight, began with asthma at the age of four. Her attacks would come on at night only. To skin tests she gave multiple sensitivenesses. The child was of a very nervous disposition, highly irritable, and very fond of her mother. She insisted on sleeping with her mother and father; if her wish was not granted, she would develop an attack between 2-3 a. m. During one of her attacks the child was removed to the hospital for one week, during which time she showed no signs of asthma or bronchitis. Upon her return home her condition reoccurred. I gave the child adrenalin but got no results. I then convinced her that by giving her some medicine to take internally it would relieve her condition; I prescribed syrup of sarsaparilla to be taken at bedtime and also informed her that if her condition did not improve she would have to return to the hospital. At once she began to improve and for the past one and a half years she has had no attacks of asthma.

A white female, aged 22, has suffered from asthma for the past two years which was not related to food or season. Her attacks were worse at night. Her family history was essentially negative. In her history she admits to having been a spoiled child. She is very active—likes to swim, dance, and attend movies. She is also a very emotional individual. To skin tests she gave a positive reaction to dust and ragweed only. She was treated for a period of six months during which time she was perfectly free of asthmatic attacks. About two months ago, following an unpleasant domestic experience, her attacks became much worse, although being under the same management and treatment. She inferred that the treatment given her was of no benefit. I advised her to stop treatment and not to return. Several weeks later she came back with an apology and wished to resume treatment. Ever since, which is approximately one year, she has been perfectly well.

A white female, aged 38, developed urticaria about one year ago, severe in character; it would come on daily at 5 P. M. She gave negative reactions to all allergens; elimination of all possible allergens as well as removal from her home to the hospital did not relieve her condition. Her urticaria would appear the same time every day. However, she would be relieved by the use of adrenalin and also large doses of sedatives. Following her stay in the hospital she was perfectly free for a period of one month. Several weeks

later when driving her car with her children in it she met with a slight automobile accident; although no one was injured she developed a severe case of urticaria within ten minutes.

I began three years ago to investigate the allergic state of the insane patients in one of our state institutions, and I have found only six cases of the allergic type in a group of 4500 patients. Among those six only four gave positive reactions to skin tests, and their symptoms were of a mild character.

PSYCHOPATHIC ILLUSTRATIVE CASES

A white male, aged 73, invalided in bed for the past three years with a diagnosis of arteriosclerosis and organic brain disease. The history of the patient reveals that he has had occasional attacks of asthma within the past two years—usually in the fall and the spring. To the intracutaneous tests he gave a one-plus reaction to ragweed and a one-plus reaction to dust (house). His attacks are mild in character and require no medication.

A white male, aged 66; diagnosis—cerebrospinal sclerosis. Had asthmatic attacks, mostly in the fall, for the past seven years, requiring no medication. He has a hemoplegia on the right side with some atrophic disturbances. To the intracutaneous tests he gave a two-plus reaction to ragweed and timothy.

A white female, aged 65, admitted to the institution in 1904, with a diagnosis of primary dementia. Recent diagnosis—mental deficiency with superimposed psychosis. She is well developed and well nourished with slight enlargement of the thyroid. Tachycardia and cardiac irregularity. To intracutaneous tests she gave a two-plus reaction to ragweed, orris root and crabmeat.

A white female, aged 74, admitted to the institution with a diagnosis of senile dementia. Arteriosclerosis was present. She is able to answer questions rationally. She maintains that she has had asthma since childhood but has been worse for the past twelve years. In fact, she was wheezing on the day of her examination. General examination reveals emaciation and emphysematous chest. Heart and lungs essentially negative. To the intracutaneous tests she gave a positive two-plus reaction to ragweed and timothy. Her mental condition has improved in the last twelve years in contrast to her asthma which has been getting worse.

A white male, aged 36, admitted to the institution in 1935 with a diagnosis of general paresis. The patient is married but has no children. Had meningitic encephalitis in 1935. Treated with malaria in 1936 with remarkable improvement. Patient appears to be very rational and very alert. Has had hay-fever for the past six years—beginning with the month of August and lasting until frost. History of allergy is negative. His attacks are becoming progressively worse. To the intracutaneous tests he gave a four-plus to ragweed, timothy, two-plus reaction to house dust and orris root; his attacks of hay fever are getting more severe in contrast to his mental condition which is getting much better.

Colored male, aged 41, admitted to the institution in 1932 with a diagnosis of general paresis and symptoms of deterioration and irrationality. Attacks occur every night between the hours of twelve and one which he maintains begins with a cough, and if he is not able to bring up mucous he has difficulty in breathing. The patient complains of nightly attacks of asthma although they have not been witnessed by his attendants. To intracutaneous tests he gave no reaction to any of the inhalants and to none of the ingestants.

Taking into consideration that allergy is a common factor among the general population, and that approximately 15 per cent. have either a major or a minor allergy it is of interest to note the small percentage of allergy which occurs in patients with organic mental disturbances. In a few of these cases where their mental condition is improved their allergic symptoms became progressively worse and vice versa.

In conclusion I wish to emphasize that in presenting this paper I am not atempting to discard the importance of antigen antibody reactions or claim new and original ideas in the etiology of allergic diseases. I have only gathered the opinion of various specialists in the field of medicine and combined them under one title in order to illustrate the relationship of the nervous system and that of the allergic individual.

In addition, I have presented a few cases histories from our own files which defintely proves that the nervous system in the allergic is hyperactive.

I do not maintain that the nervous system is the sole etiological factor in allergy; however, I am of the opinion that the nervous system is of great importance in most of them, by releasing substances, such as histamine or acetyl choline into the blood stream and tissues which create a hyperfunction producing the allergic phenmoenon, and it frequently is the sole factor in many of them.

Therefore, if we are to treat allergic individuals successfully, we must not confine our treatment solely from the knowledge derived from skin tests, but must attempt to treat the individual from a psychological and a neurological standpoint as well in order to bring about clinical improvement.

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SURGERY IN THE MENTALLY ILL

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I appreciate the honor Dr. Campbell has given me by asking me to address this meeting. However, it was with a great deal of timidity that I accepted his invitation, knowing that a great many of you gentlemen have had some thirty to forty years of experience with the treatment of the insane while I have had a mere six years as a consultant surgeon. I believe that the best way to take up this very difficult subject is to start out first by going over briefly the surgical problems in an insane institution in general and then taking up the mental effects of surgery on the different mental diseases.

We all know that the history is the most important thing in the diagnosis in any medical or surgical patient. Most psychotic individuals, at least, are unable to give any subjective symptoms. Usually the first indication of an acute illness in these patients is detected by observing some abnormality in their behavior, which is often several hours after the onset of the illness. They do not complain of pain or nausea nor is their posture or facial expression suggestive of discomfort. The mental disability predominates and to a greater or lesser degree masks most physical abnormality which they may experience. Often they eat their meals and conduct themselves in their usual manner only a few hours prior to their death. The objective as well as the subjective symptoms are often absent or, if present, misleading. Examination of the abdomen in acute abdominal conditions usually does not show the tenderness, rigidity, distension and other cardinal symptoms that one usually finds. The symptoms which are wholly or in part under reflex control are frequently abnormal, although the rigidity in perforation of the bowels or spreading peritonitis is usually present to some degree. Rarely do they present the expected picture of shock and, for the most part, the temperature, pulse, respiration, blood count and urinalysis are of little diagnostic value. In other words, the history usually amounts to some attendant having found the patient not acting the way he usually has acted during the last twenty-four hours or so and thought that he should be brought into the hospital. We have tried during the last four or five years to remedy this by: (1) having a good history and physical examination on admittance; (2) periodic examination every six months for all patients; (3) having the surgical staff examine all questionable surgical cases; and (4) instructing nurses and attendants to notice all lumps, swellings, sores and other abnormalities while bathing the patients.

The next problem that we have is permission to operate when we deem it necessary. As you all know, in an institution the person responsible for giving permission usually is hard to contact because he lives out of town. However, after trying by all possible means to get permission to operate without success and we find that it is absolutely necessary, we operate without permission; that is, as a life-saving measure. The administration of this hospital is absolutely against this practice except in very urgent cases.

The general condition of the patient is another very important problem in the state institution. Up to five or six years ago East Moline State Hospital had a great deal of pellagra and scurvy; however, the inmates at the present time have a very well balanced diet prepared by a dietitian. Feeding and proper care of a patient in an institution alone does not make the individual a good risk. As we all know, they are not active, they do not use their muscles, and I have noted that most of them do not bleed hardly at

Read before Managing Officers of Illinois State Institutions at East Moline State Hospital, East Moline, Illinois.

all following the initial incision and it is seldom necessary in an abdominal incision to put on more than two or three hemostats. In other words the tonicity of the patient in an insane institution is poor. The skin itself is often contaminated from excretions even though the patient is bathed regularly. This in itself would increase the risk of wound infection.

In this institution after the patient has been brought in and worked up by the residence staff we are called in and talk the case over, not only with the resident of the staff who has examined the patient, but also with the rest of the staff. We have a good frank discussion on what the patient might have and on his mental condition; and I insist in each case that every member say exactly what he thinks the diagnosis of the case is and what treatment he thinks is best. By this procedure I have found that I not only have the council of the older members of the staff as to the probable postoperative problems as far as the mental condition of the patient is concerned, but also it helps me teach the younger members of the staff surgical principles which they all are very eager to learn, especially in an institution where there is very little surgery done compared with the number of patients. In the old days the East Moline State Hospital used to have a surgeon that lived a long distance from the hospital who would come in once a month and operate in certain cases that the staff would bring up for surgery. This arrangment, obvious to everybody, was poor, not only for the staff, but for the inmates. It is pretty hard to have a consultant surgeon come a hundred miles to feel an abdomen to see whether it is necessary to operate, to say nothing of getting in touch with him to look after a postoperative complication; I believe it is absolutely essential that a state institution have its surgeon live near the institution so that he may act promptly in any emergency.

The postoperative care of an institutional patient has many pitfalls. The other surgeons who have written on this subject seem to have had very little, if any, trouble. This unfortunately has not been the case in my experience. It is true that is unnecessary in most cases to use much morphine as these patients usually are quiet for long periods of time with no narcotic at all. This however, does not mean that they do not have to be watched every minute. I will cite a few of our unfortunate accidents that will bring out this point. One day we operated on a patient that was jaundiced from a common duct stone. The stone was removed, a tube was put into the common duct, another tube was put into the gall-bladder which was drained, and a third tube was put in front of the gall-bladder. The same day we operated on a patient who had had a perforated intestine from eating bones. After using suction in her abdomen we put a drain tube in her cul-de-sac. Both patients got along fine. However, on the second day I called to see them and found that all tubes had been pulled out of both patients and, strange though it may seem, they both had uneventful recoveries, even though the patient with the common duct stone did drain bile for two or three weeks following the operation. This case made me wonder whether it is necessary in our private surgery to drain the common bile duct as long as we do. In another case in a chronic alcoholic we sewed up a perforated duodenal ulcer. He did well. However on the second night one of the patients near his bed gave him a big chew of tobacco which he promptly washed down with a 1,000 cc. of his Murphy drip. In another case we resected the cecum of a colored patient who had dementia praecox. The resection was necessary because of a thrombosis of the mesentery. I put a clamp on the end of the large intestine after cutting it off with the cautery and sewed a tube into the open end of the ilium. These were left out on the abdominal wall and the patient did fine for three days; the drainage was good and his condition was excellent. However, on that same day he got underneath his dressings, took hold of the clamp that was on the large intestines, and jerked the intestines out of his abdominal cavity. He died later from shock. If I had this case to do over again I would have done an anastomosis at the time of the operation and closed him up without drainage. I believe it is justified in an institution where an accident like this may happen, to take a little more risk in the first operation as far as the patient's life is concerned by doing the complete operation in one stage. Another case was a patient who had broken his shoulder following the shock treatment for dementia praecox. He had a fairly good functional result by putting his arm in an airplane splint. I did not believe an open reduction was indicated in his case; however, his family was not satisfied and he was taken into

Chicago where an open reduction was performed. While in Chicago, he picked his wound open with a lead pencil following operation. Of course, he developed a nice infection and at present he has an osteomyelitis, which has given him a much worse shoulder than if he had not been operated on.

Special surgical instruments are necessary in certain abdominal operations, or at least it makes the operation easier for the surgeon. We have solved this problem by having our instruments sterilized at the Moline City Hospital, put in sterile trays, and sent out to the state hospital. In our East Moline State Institution we are gradually improving our surgical outlay under the able administration of the present officer in charge. However, in the state institution we will need a 100 m.p. x-ray and fluoroscopic table to study our intestinal pathology. We need an outside wire for coagulation as the power is not constant in this institution. We have a doctor who makes our slides for pathological study, but it is necessary in questionable cases to send the slides away for diagnosis. This, I think, can be remedied by having a local pathologist come to the hospital when necessary. The fracture apparatus in this hospital is not what it should be. We borrow what we need from the Moline City Hospital and then order the necessary equipment later on.

We have been fortunate in the last two years to have studied five cases of perforated intestines in the East Moline State Hospital and in my private practice. Three cases were at the state hospital and two were in private practice at Moline City Hospital. I will group these cases, as they are interesting because of their similarity. None of the five patients complained of sharp or excruciating pain at any time. None of them vomited. They all had rigid abdomens. In every one the tenderness was in the right iliac fossa and none of them had a blood count of over 14,000. They were all operated on. In all five cases there was no tendency to wall off the pathologic process. They all had a white milk-ish-like, free fluid in the abdomen. All of them had the perforation through the ilium within a foot and a half of the iliocecal valve. In four of them the bone was removed and the intestine sutured; in the fifth the appendix was removed and the perforation missed. This patient expired and at autopsy the bone was found halfway through the intestines. The other four had uneventful recoveries, one of the patients having pulled her tube out as mentioned above. These bones varied from a bone three inches long to a small triangular bone 1 cm. on the sides.

We have been treating tuberculosis surgically such as phrenectomy, massive collapse, etc., the same as is done in a tuberculosis sanitarium.

The question of hernia in a state institution comes up often. I believe that all hernias should be repaired in a state institution for the insane, not only because it makes it more comfortable for the patient to get around, in this way taking away any irritation that the hernia may cause, but it also takes away the possibility of a strangulation, which in these people usually is not found until it is necessary to resect a piece of gut. We have operated on three feeble-minded patients for inguinal hernia. The old timers in the institution claim that a hernia in the feeble-minded will not hold up, but in the three we have done the repair has not broken down, even though the staff physicians are constantly examining these patients.

The next subject that is all important in an institution for the mentally ill is to determine what good, if any, surgery does towards the improvement or cure of the individual's mental condition. I believe first that we can make a sort of general statement that any patient with any degree of dementia has less than two per cent chance of improvement by surgery. Under this we can list (1) dementia praecox; (2) general paresis; (3) alcoholic psychosis; (4) epilepsy. The high percentage of improvement following surgery in an institution, of course, is the manic-depressive patient, and that is usually found following pelvic operations in the female. We know that women who have pelvic lesions often have a well-marked chain of nervous symptoms varying to such an extent, if profound, that woman may be said to be insane, and it is the experience of every surgeon that the removal of the lesion in many cases is followed by the disappearance of the nervous and mental symptoms. We also know that certain insane are more susceptible to extrenal stimuli than normal individuals; therefore it is logical to believe that they are more susceptible to internal or somatic impulses and that if the source of the pathological stimuli were removed, we might hope for

improvement in the mental condition. It is known that coincident with the mental improvement there is a physical improvement; therefore, it is logical to believe that any procedure that improves the physical condition has an indirect effect on the psychosis. The following is a portion of a table taken from Taussig, in which the author has grouped together recoveries and improvements in female surgery and has added his own figures to the series:

Author Reporting Figures	No. Cases	Mortality	Improvement
Rohe	34	..	56%
Hobbs	173	2%	68
Henry	28	33	57
Mayo	60	..	16
Broun	242	2	18
Taussig	17	..	17
Gibson	100	1	17

It will be seen that the first investigators made rather fantastic statements, while there is a remarkable similarity in the results of the last four.

Goiters and psychosis is another interesting subject and one in which there are many pitfalls. In the Cleveland Clinic out of 2,286 cases of toxic goiter there were only 24 cases or less than one per cent that the psychosis was caused by a toxic goiter. The contraindications in a general way for surgery in a toxic goiter with psychosis are (1) history of insanity in the family; (2) delusions; (3) hallucinations. It is very hard to determine whether to treat the psychosis. I believe if there is a question at all it is better not to operate. In an institution you might get by with it; however, in private practice I have found to my great chagrin that it is not a smart thing to do. I would like to cite two cases to illustrate my point. One patient is in the state institution here now. Her name is Mrs. S., a dementia praecox; and another who has been in here is Mrs. B., a manic-depressive. Mrs. S. was a carpenter's wife. She came into my office and told me that she thought she was going crazy and that she had just seen five other physicians who had told her she needed her goiter taken out immediately. Her goiter was a toxic adenoma. Her basal metabolism was plus 16 and her pulse was 120. I did a thyroidectomy on her, and her physical recovery was uneventful. However, during her stay in the hospital she informed me that there was a woman in black walking down the hall with a barbed wire around her neck and that she came in and rapped on the radiator so that it disturbed her. I thought at first that she was joking and let it go at that. However, she steadily became worse and ended up in the East Moline State Hospital and a diagnosis of dementia praecox was put on her. This was after she was treated at least a month in the home. This case brings up another important point in the treatment of these individuals, and that is cooperation of the physicians in the state hospital with the doctors on the outside. This was before the present administration, when I went in and asked to examine my patient. I was very interested to know whether her general condition was improving. However, as I was looking at the chart in the hospital the chart was snapped out of my hands and I was told to leave the hospital, that they didn't need any outside help in the treatment of their patients. As a matter of fact I had made no suggestions as to the future treatment for Mrs. S. I am glad to say that the present administration gives whole-hearted cooperation with any physician on the outside who would like to examine his patient in the hospital, also who has any ideas how the individual patient might be improved. The other patient, Mrs. B., was a manic-depressive. She had lost her husband about three months before she came to me. She was very nervous, had exopthalmos, basal metabolism was plus 20, pulse was 112, and she had a marked tremor. She also stated that she thought she was going crazy. I did a thyroidectomy on her and the pathological report was Grave's Disease. However, about three weeks later I was called by one of her neighbors. She told me to "come quick." Mrs. B., had all the lights on in the house and she was yelling out of the window. I hurried up to her home which was in a very thickly populated part of town, and here was Mrs. B., with her head out of the second story window, her house lighted up like a church, and she was yelling, hailing the second coming of Christ. There must have been fifty people around the house and if there is any question in any of the minds in the audience here how I felt, walking up the stairs with my grip in hand, they should be in the same position. This patient turned out to be a manic-depressive and she has had remissions when she has been all right mentally.

Brain surgery in the mentally ill, I believe, is accepted in (1) brain tumors; (2) brain abscesses; (3) brain trauma followed by Jacksonian epilepsy. It is questionable whether the

removal of the white matter of the frontal lobe in dementia praecox or destroying the white matter in the frontal lobe by injections of different drugs as they do in some foreign countries is advisable. We believe that the improvement that they get from these radical procedures is from shock. This may or may not be the same as the shock that is obtained from the Insulin treatment. However, the result seems to be the same.

The mortality following surgery in an insane institution seems to be a question for discussion. Most of the authorities claim that their mortality is no higher than it is in private practice. This conclusion we cannot agree with. Our mortality in our private practice in major surgery is about two per cent. Our mortality at the state hospital runs somewhere between 10 and 16 per cent. I have tried in a part of this paper to explain why the mortality is higher in an insane institution. It is significant however, to find that most of the statistics that are available are on female surgery.

In conclusions I am proud to say that in this hospital we are obtaining over 30 per cent autopsies, also that we have found the pathologic lesions in nearly all of our surgical procedures. We have had some mental improvements following surgery, but I believe that a great many of the improvements have been due to surgical shock and only time will tell whether the improvement is permanent. We have had some sad experiences as noted above, but at no time have I ever seen the patients neglected or treated roughly by any of the doctors or attendants in this hospital. I would like to add at this time that the managing officer of this hospital has obtained an eye, ear, nose, and throat specialist, skin specialist, lung specialist, genito-urinary specialist, and surgeon to look after the inmates. These men give freely of their time and knowledge and are as thorough when dealing with an inmate as they are in their own private practices. I believe that this is very important and a great advance over the old system of having the psychiatrist taking care of all diseases, and it gives the mentally ill just as fine treatment as he could get in a private institution—in many cases better.

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ELECTROCARDIOGRAPHY IN GENERAL PRACTICE

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I might preface my remarks by stating that I do not offer electrocardiography as a panacea for the diagnosis and prognosis of all cardiac ills. There is, as we know, in clinical medicine no so-called instrument of precision that is not infallible. Clinical findings and clinical values will always prevail; the various instruments serve only for the most part as confirmatory evidence. It sounds perhaps paradoxical, but nevertheless true that the more familiar one is with the electrocardiogram, the less likely does he have to depend upon it.

White[1] in a recent monograph on heart disease gives certain relative values to the various methods we have at our disposal in making a cardiac diagnosis. In his opinion he places the following relative values on each:

History Taking .....45 per cent.
Physical Examination .....35 per cent.

Electrocardiogram .....10 per cent.
X-Ray Examinations ..... 5 per cent.
Other Laboratory Tests..... 5 per cent.

For the sake of clarity and coherence, permit me to review certain fundamental physiologic principles of the heart. The heart is essentially a hollow neuromuscular organ with the following properties peculiar to it, viz.:

1. Contractility and tonus.
2. Irritability, i.e. the ability to contract or react to stimuli.
3. Conductivity very important in normal heart action and in electrocardiographic studies.
4. Rhythmicity and automaticity the ability of any part of the cardiac musculature to initiate contractions; this property varies in degree in different parts of the heart.

In regard to the above properties we might review the sequence of events occurring in a normally contracting heart.

The impulse for contraction in the normal heart arises in a specialized mass of cardiac muscle, the sino-auricular node or the Keith-Flack node (the pace maker) located in the right auricle at the base of the superior vena cava. From here the impulse is propagated over the entire auricular musculature until it reaches the auricular ventricular conduction system. This system, which is the only definitely established muscular communication between the auricles and ventricles, consists of the A.V. node or node of Tawara located at the base of the interauricular septum posteriorly. The A.V. node and bundle bifurcates into a right and left branch whose fibers ramify extensively beneath the endocardium and into the myocardium. The S.A. and A.V. nodes are abundantly supplied with parasympathetic (inhibitory) and sympathetic (accelerator) fibers, the right acting predominantly on the S.A, and the left on the A.V. node.

Let us now briefly recall what occurs in a contracting muscle fiber. If two wires from a galvanometer are connected to both ends of a muscle fiber AB and this fiber is stimulated to contraction, a positive EMF is developed at A, whereas the electrical potential at B is negative and a current flows from A to B as indicated on the galvanometer, the muscle fiber then returns to rest, and while doing so a current is produced in the opposite direction. This is the so-called diphasic action current. This of course takes place in contracting cardiac muscle. It was this fundamental principle that led Einthoven to the development of the electrocardiograph with the string galvanometer.

Let us again recall another fundamental physical law, viz.: "A conductor conveying a current of electricity if suspended in a magnetic field will move at right angles to the lines of force of the magnetic field." The degree of movement is directly proportional to the strength of the current. With these fundamentals in mind, Einthoven constructed the first string galvanometer electrocardiograph consisting of:

1. String conductor of fine spun quartz plated with gold.
2. Electromagnet, within which the conductor was suspended.
3. A source of light to illuminate the shadow of the string.
4. A microscope to magnify it and camera, motor, timer and batteries.

This worked as follows:

Through the medium of electrodes attached to the body the conductor picked up the minute currents generated by the heart, and oscillation of the conductor was photographed on specially ruled sensitized paper. The conventional electrodal leads of #1 (right arm and left arm), #2 (right arm and left leg), and #3 (left leg and left arm) were used.

Today this is refined in some respects and the radio tube is employed to amplify the heart voltages. The high amplification obtained in this way makes possible the use of a rugged galvanometer. The rotating element of this galvanometer is mounted on a mirror which reflects the light from a high intensity incandescent lamp. Variation in the heart potential causes rotation of the mirror, thus displacing the beam on moving photo-sensitive film or paper. In this way is the electrocardiogram produced.

The vacuum tube amplifying type of eletrocardiograph with an appropriate galvanometer makes possible the faithful recording of the high frequencies present in the heart potential cycle. It has been shown by analyses of electrocardiograms at the Massachusetts Institute of Technology that these high frequencies constitute a significant part of the electrocardiogram. Hence the importance of using an electrocardiogram of the requisite sensitivity for recording heart potentials.

With what has gone before I think we can now intelligently draw up our definition of an electrocardiogram, viz.: "It is a photographic repre-

sentation of the electrical activity of the heart." Indirectly, this gives evidence as to the size and state of the cardiac muscle and conditions of the conduction system. E.G. large muscle fibers usually produce strong currents with high voltage; weak, degenerated and scarred muscle usually low voltage, etc.

Graphically this series of waves is represented in which the P wave represents auricular activity and the spread of the wave of excitation from S.A. node to auricles and A.V. node. The P.R. interval indicates the time for the conduction of the sinus impulse to the ventricular muscle; normally this being 0.12 to 0.20 second. The QRS complex represents ventricular activity, and the time it takes the impulse to traverse the ventricles, and normally should not exceed 0.10 second. T and RT segments represent further ventricular activity (recovery of ventricles). What, then, does the electrocardiograph have to offer to the general practitioner? In my opinion it is of greatest value in the following conditions:

1. *Cardiac Neuroses.* Here it is of value to aid in definitely ruling out organic heart disease and thus make psychotherapy of value. It is too often true that we as physicians many times are responsible for making mental cardiac cripples of neurotic patients. This happens because we have at some earlier date, because of such symptoms as seen in neurocirculatory asthenia, with dyspnea, fatigue and precordial distress, or because of an obscure functional murmur, labeled these people "heart trouble." Thus the electrocardiograph, in addition to negative clinical findings, can support the physician's statement to the patient that "you do not have heart trouble" and thus effect a cure.

2. *Infectious Condition.* It is of value especially in rheumatic fever, scarlet fever, diphtheria and chorea. Here the evidence of cardiac damage as seen in the electrocardiogram will lead the physician to promote a guarded convalescence. It is of value sometimes in diagnosis of obscure cases of rheumatic fever or chorea because in nearly all these cases there is a definitely prolonged PR interval very early, before any cardiac manifestations.

Levine[2] cites a case in his experience of a young boy with an acute abdominal condition suggestive of appendicitis, in whom he suspected an atypical rheumatic fever. An electrocardiogram showed a definite prolonged PR interval, and because of this a diagnosis of rheumatic fever was made, salicylates given and patient recovered.

3. *Early Myocardial Degeneration or Weakness.* The electrocardiograph is of great value here, especially when there are vague or very slight symptoms with few if any physical findings. On the other hand, not all cases of palpitation, dyspnea, chest pain and cough are due to the heart and in these cases the electrocardiogram is of value, for if it is absolutely negative it leads the physician to search elsewhere for the cause of the cardiac symptoms, such as pernicious anemia, gastro-intestinal pathology and chest conditions.

4. *Coronary Thrombosis.* Electrocardiograph is of untold value here, especially when cases are atypical, such as:

1. Very slight symptoms with relatively negative findings.

2. Those with acute epigastric distress to differentiate surgical abdominal conditions; a normal tracing does not necessarily exclude coronary involvement although in the past few years the use of additional leads beside the conventional three mentioned have indicated coronary involvement which would not have been manifest otherwise.

5. *Cardiac Arrythmias.* It is true that many of the arrythmias can be properly diagnosed at the bedside, but there are times when it is impossible and the electrocardiographic tracing is imperative. The electrocardiogram should be used in all cases of arrythmias, however, to confirm the clinical diagnosis and to determine whether or not there is organic pathology. It is of special use in diagnosis of such conditions as:

1. Recurring multiple extra-systoles from auricular fibrillation, or pulsus bigeminus from heart block.
2. Auricular flutter from auricular fibrillation.
3. Auricular and ventricular tachycardia and the other paroxysmal tachycardias.

6. *Hypertension.* Electrocardiographic findings before cardiac symptoms or findings are of value in determining whether hypertension has been present for some time and is likely to be serious or whether it is recent and possible transient.

7. *Valvular Heart Disease.* Here the electrocardiogram is not of much aid for diagnosis, but is of value in determining the amount of muscle damage, types of irregularities, if present, and other pathological changes besides valvular defects such as coronary involvement.

8. *Digitalis and Quinidine Therapy.* It is of

value here in determining early toxic effects of the drugs. For instance, in digitalis intoxication, before the classical clinical signs of the "puke, the purge and pulsus bigeminus," the electrocardiogram shows prolonged conduction time, depression of the ST segment with inverted T waves and tendency to ventricular extrasystoles.

Briefly, this gives you a bird's-eye view of some of the applications of the electrocardiograph in general practice and properly used is of great value to the clinician, whether he be general practitioner, surgeon, internist or pediatrician.

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CHLORINE DEATH POINT OF COWPOX VIRUS

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The death point of viruses to germicides differs from that of bacteria. The studies of Gordon[1] show that cowpox virus can withstand five per cent. phenol for one hour and glycerine or ether for months. Park and Williams[2] recommend the use of one per cent. phenol and 1 to 10,000 brilliant green dye as a vaccine preservative. Powell and Jamieson[3] demonstrated that merthiolate does not inactivate vaccine virus.

Herein are reported tests to determine the death point of cowpox virus to chlorine as used in drinking water. A period of ten minutes was selected for the tests, as this is the minimal time required for water to travel from the chlorinator to the nearest consumer in many community water supplies. Ten tubes of fresh commercial vaccine were pooled and one portion of vaccine was added to four portions of various concentrations of standardized chlorine water[4] at room temperature (25 C.). The vaccine was applied by multiple puncture method (thirty needle pricks) to the arm of an adult. The same experiment was repeated with cowpox vaccine diluted with ninety-nine parts of standardized chlorine water; and with vaccine which was diluted (1 to 50) with sterile water, passed through a Mandler candle, and then further diluted with standardized chlorine solutions to a final dilution of vaccine of 1 to 100.

TABLE 1

Results obtained 84 hours after vaccination with chlorinated cowpox virus.

		Chlorine, parts per million									
	Control	½	1	2	5	10	20	50	100	200	400
Vaccine 1:5....	X	X	X	X	X	X	X	X	X	X	X
Vaccine 1:100..	X	X	X	X	X	X	X	X	X	X	X
Vaccine 1:100*.	X	X	X	0	0	0	0	0	0	0	0

X, virus living; 0, virus dead: *, Mandler filtrate. Time of exposure to cholorine ten minutes.

The skin reactions were examined 84 hours after inoculation. Table 1 shows that the vaccine virus in dilutions 1 to 5 and 1 to 100 survived chlorine up to 400 parts per million for ten minutes. However, the Mandler filtrate survived a 1 p.p.m. chlorine concentration only.

DISCUSSION

Thousands of communities and millions of people depend on chlorine treatment of the public water supplies to safeguard their health. Chlorination is commonly believed to destroy all pathogenic germs. Hoover[5] states that a "residual chlorine represents a factor of safety and indicates that all organisms have been destroyed. The residual should be between 0.1 and 0.2 parts per million." That chlorine, as commonly used, protects only against the non-spore bearing bacteria was shown by Tonney and associates.[6] They tested the chlorine death point of 361 strains, comprising thirty-two species of the common bacteria; a large percentage of these strains were killed by 0.1 p.p.m. of free chlorine, in 15 to 30 seconds. None survived 0.25 p.p.m. *B. coli* stood out as in general the most resistant. Similar tests were also made on spore bearing organisms. One hundred and forty-two strains of seventeen species of spore bearing organisms were studied, which included the more important pathogens and non-pathogens of both aerobic and anaerobic types. The anaerobes required a range of concentrations from 1.0 p.p.m. for the least resistant, *Cl. welchii,* to 40 p.p.m. for a strain of *Cl. tetani.* The aerobes required a higher and wider range of chlorine concentrations, varying from 18 p.p.m. for *B. aerosporus* to 280 p.p.m. for a strain of *B. vulgatus.*

While cowpox or smallpox viruses are probably never conveyed by public drinking water, these experiments suggest that such a contamina-

tion could survive present methods of water purification. The susceptibility of the Mandler filtrate to chlorine suggests that cowpox virus may exist in two conditions, (a) a non-filtrable and chlorine resistant, and (b) a filter passing and chlorine sensative.

CONCLUSIONS

Cowpox virus treated for ten minutes with free chlorine solutions was not killed by several hundred times the concentration usually considered adequate to protect public drinking water supplies.

636 Church Street.

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4. Mr. Horace R. Frye and Mr. Armon Lund of the Evanston Water Department Filtration Plant prepared the chlorine solutions. They report that the presence of ten per cent. glycerine reduced a standard chlorine solution from 36.5 p.p.m. to 31.9 p.p.m., and a chlorine solution of 0.36 p.p.m. to 0.24 p.p.m. in ten minutes. To evaluate the chlorine death point these reductions should be allowed in Table 1.

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ETIOLOGY OF SENILE CATARACT

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Taken as a whole, senile cataract is a most serious disease and to date is still very formidable in the causation of total blindness. Books on ophthalmology have generally been encyclopedic about such cataract and its cause or causes, or have entirely omitted a comprehensive description of true fundamental knowledge on the subject. However, from time to time one reads about experimental studies in the medical press, including many variated chemical tests, but thus far these observations have been unsatisfactory. Postmortem observations will hardly bring about a solution as to the cause of this type of cataract. Why?

Because it would seem from all outward manifestations, as well as common sense, that a cataractous lens must be studied on the living subject in its relation to its anatomic-physiological function—to its anatomic-physiological mechanism. Physiology advances the idea that lenticular cataracts are brought about by a peculiar coagulation of the albuminous substance in the lens, but does not explain why such coagulation occurs during a certain period of life, nor do we learn from physiology the reason for this process of coagulation. Also, the metabolism and nutrition of the lens seem confusing to many.

A writer, Brav (Medical Record, Nov. 17, 1937), states: "The problem of lens metabolism has as yet not been solved and is still within the domain of speculation. How is the lens nourished? The lens, having no lymphatic channels, no vascular supply and no direct nervous system, cannot really have a true metabolic arrangement. Active metabolic processes would imply a physiological wear and tear and a carrying off of waste products resulting from such metabolic changes. There are no channels, however, that can carry such waste product from the lens into the circulation."

The same author further states: "Some physiologists assert that there is a wear and tear, that the waste product is not carried off, but attaches itself to the nucleus and becomes compressed and thereby increases the size of the nucleus. The lens having no active action to perform probably requires no food. Its growth, which is practically imperceptible, is due to a highly specialized vital force inherent within the lens substance itself. The lens is an autotrophic self-nourishing body. It must have an autogenic vitalizer, produced by the heat which results from the constant friction or movement of the lens in response to the accommodative demand and by constant radiation of light. The chemical changes noted in cataractous lenses have really developed in the lens after the opacification sets in and are not the primary cause for the development of cataract."

Aside from the above theory concluded by the above writer, he stresses principally the refractive error and the phenomenon of accommodation as chief causes in senile cataract—a fact long ago stated in connection with such theories by various writers and observers in our literature on ophthalmology.

So, believing as we do, that a lens must undergo some metabolic processes and must be nourished as well as any other part of the body, though the manner and mechanism of method

may be a somewhat disputed fact, we believe also that some chemical change of a toxic or allergic nature is produced in the body (rheumatism, gout, syphilis, albuminuria, diabetes) which will bring about alterations to the ciliary body and the canal of Petit, with its resultant trauma to the lens capsule and, of course, refractive changes and opacification due to these alterations and diminished or lack of nutrition and sclerosis.

It is noteworthy to mention here that errors of refraction may at best be the effect of sclerotic changes in the lens and not its cause; that it would seem that the capsule is transparent and elastic enough to withstand regular functional processes; that it would hardly seem possible that the lens capsule would sustain trauma by its regular functional processes, regardless of the individual's age, providing no pathological, toxic-chemical or allergic substances would alter and affect the ciliary body, the ciliary processes, the choroid, the capsule and the zone of Zinn with its canal of Petit.

Then in connection with statements made by authors that trauma produced by hyperactive accommodation and uncorrected refraction is a principal factor in the formation of senile cataract, cases have been known where many individuals who wore the properly refracted glasses since their early youth and who had check-ups every year or two, became cataractous after the age of sixty. As to heat and irradiation in such cases as, for instance, glass blowers and bakers, we have rather a pitiful and non-scientific as well as a meager recording on the matter, for, even among bakers and glass blowers, cataracts are rare before the sixtieth year.

REPORT OF THREE CASES

Case 1. Mrs. M. B., aged 60, mother of a physician, had been under observation for about ten months; stated that she wore glasses for the last twenty-five years: she believed she wore the properly refracted and fitted eyeglasses during that time; she had check-ups every year or two; her health was fairly good except she was troubled with rheumatism of her extremities from time to time. When she reached the age of sixty she began to complain of blurred vision in her left eye. Ophthalmoscopic examination showed an incipient catract (December, 1938). Patient is still under observation.

Case 2. Mrs. I. A., aged 63, whom I had operated upon for senile catract in the right eye in March, 1939 at St. Mary of Nazareth Hospital, gave a similar history as above case. Her heart and lungs were normal; she suffered from no disease or disturbance outside of a certain amount of rheumatism in her extremities. She wore glasses for many years—properly refracted and fitted to the best of her knowledge; she had check-ups on her refraction from time to time. When she reached the age of sixty-two she began to experience a certain amount of blurring in the right eye. A year later, when she consulted the author, she was completely blind in her right eye. Ophthalmoscopic examination revealed a ripe senile cataract.

Case 3. A woman aged 68 whom I had operated upon for senile catract in April, 1939 at St. Mary of Nazareth Hospital, gave a similar history—a history of good health except a slight tendency to rheumatism. Wore glasses—proper eyeglasses for many years; never experienced "eye trouble" except when she reached her late sixties.

To appreciate more fully the probable etiological factor of senile cataract (theory), a brief description of the human lens, with emphasis on certain phases of the anatomy and physiology, is in order.

SUPPORTIVE ANATOMICAL DATA OF THE HUMAN LENS

The crystalline lens is a biconvex transparent body measuring about five mm. in thickness and about nine mm. in diameter, situated in the anterior portion of the eyeball between the aqueous and the vitreous chambers. It is surrounded by a transparent capsule and held in position by a so-called ligament known as the suspensory ligament or zone of Zinn. In the adult lens we note a peripheral portion or cortex, and a central portion, the nucleus. The cortex is semi-solid in consistency and colorless; the nucleus is somewhat harder and has a yellowish tint. The nucleus generally increases in size with advancing years and the cortex diminishes in proportion; this change is known as sclerosis. In structure the lens consists of concentric layers formed of long, hexagonal fibres, the edges of which are connected by a transparent substance of cement-like consistency, leaving fine lymph channels. It is devoid of blood vessels except in fetal life—its nourishment being derived, according to some, from the ciliary body (important to remember).

The capsule of the lens is a highly elastic, thin, homogeneous membrane which surrounds the lens, being known as the anterior capsule in front, and as the posterior capsule behind. The front capsule is the thicker and its posterior

surface is lined by a layer of cuboidal epithelium from which the lenticular fibres are formed. The zone of Zinn is a delicate membranous structure extending from the ciliary body to the capsule. It surrounds the inner surface of the ciliary body from the orra serrata to the apices of the ciliary processes and then proceeds to the lens, dividing into three layers attached respectively to the anterior capsule, the equator and the posterior capsule. Between these layers and the equator of the lens an annular space one-tenth of an inch wide, triangular on section, is found and known as the canal of Petit; it communicates with the posterior chamber by means of slit-like apertures between the fibres of the anterior portion of the suspensory ligament or zone of Zinn. Some anatomists state that between the folds of the suspensory ligament or canal of Petit we find a fluid supposed to assist the nutrition of the lens (of immense importance).

Physiologically considered, the lens plays an important role in the act of accommodation, only in a passive manner; its physical mechanism depending entirely upon the normal, healthy function of the ciliary body and ciliary muscles. The lens is devoid of direct connection with the nerves of accommodation. To keep the lens transparent and elastic, nature has surrounded it with a remarkable transparent capsule to protect the lens against the entrance of fluids or against the actions of the more common infections from the anterior segments of the eye. In fact, we often find the aqueous involved in iritis; we find pus in the anterior chamber without any damage to the anterior capsule; but very rarely do we see the rupturing of the capsule from without and involving the lens (except in physical trauma).

In conclusion, may I state that the foregoing opinions are submitted as a working theory and that as such are open to criticism or adjustment to practical facts and with a view of further study and observations in the clinical rooms.

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RECTAL GONORRHEA

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Presented before the American Association for the Advancement of Science, Medical Section, American Venereal Disease Society, at Milwaukee, Wisconsin, June 21, 1939.

The ordinary case of gonorrhea in the female should be regarded as a gonococcic infection of the urethra, cervix, and *possibly* the rectum. This is necessary, as so many of the women have rectal gonorrhea; in the male it is unimportant. At present the uncomplicated case of female genital gonorrhea is thought of as an infection of the cervix, probably of the urethra, and possibly of Bartholin's glands. The rectum is rarely considered. The triad: cervix, urethra and rectum should be borne in mind. And these sites indicate respectively the tissues most frequently infected.

The presence of the rectal infection has attracted but little attention in this country until recently, although foreign literature has recognized its importance in the last decade. There is general agreement among continental authors that it is a common concomitant of gonorrhea in women, that the incidence is high (15% to 85%), that it is easily overlooked and that the gonococcus can retain its virulence in the rectum for more than a year. One looks in vain for an informative consideration of the matter in any of our textbooks on gynecology or venereal disease. If it is mentioned at all, it is generally stated to be a self-limited disease.

Bickel and Abraham[1] state that in 15 cases, if histories as given by the patients are accepted as correct and reinfection ruled out "even after gonorrhea of the genitalia has remained cured for more than ten years, gonococci may still be found in the rectum." Clements and Hughes[2] in their valuable report mention seven cases suspected of gonorrhea for various reasons, which had rectal infection and in which no gonococci were found in the secretions of the urethra and cervix. Ten of 59 cases of Brunet and Salberg[3] examined after intervals of six months to two years were found to have gonococci present. Certain it s necessary to avod exaggerating the importance of rectal gonorrhea, but with equal certainty it is necessary to establish

its proper status and having this generally known.

Rectal Gonorrhea in the Male. The disease is rare in men. De Bere[4] found it in a little over 2% of 220 men having gonorrhea in a Chicago penal hospital, where a relatively high incidence might be anticipated. Stühmer,[5] who unintentionally conveyed the infection from one to twenty-five others by an infected glove, describes a much more severe type of proctitis than is ordinarily seen. This may have been an unusually virulent strain of gonococci. Two of the most severe cases I have seen were in men, but there is no general agreement that the gonococcus causes a more severe inflammation in the male rectum.

Rectal Gonorrhea in Infants. The rectal infection in infants is of consequence in hospitals and institutions where a single case may cause a widespread disease. Byfield and Floyd[6] have reported the "relation of gonorrheal proctitis in male infants to epidemics of vulvovaginitis" and cite the dangers of reinfection by discharges on diapers and on tables on which the children are seated while being bathed and dressed. Bloomberg and Barenburg[7] have reported gonococcic proctitis as a cause of blood and pus in the stools of infants and call attention to the danger of the "latent" case. Rectal infection as a complication of vulvovaginitis in children is rather generally known. It has received attention in the literature especially in Europe; nine authors report an incidence of from 35% to 84.6%. Rectal involvement is more frequent in children than in women, on the basis of these statistics.

Rectal Gonorrhea in Women. The following is a summary of data and conclusions made in a study of 110 cases of gonococcic infection of the rectum in women having genital gonorrhea and previously reported.[8] Brunet and Salberg[3] have since reported 250 cases and gave an incidence of 42%, and Clements and Hughes reported 69 in 169 cases of female gonorrhea (33%), in which both smears and cultures were made using McLeod's and Gordon's oxydase reaction[9] to identify the gonococci colonies.

In my series a positive rectal smear was obtained by a cotton-tipped applicator passed through a Kelly urethroscope, a proctoscopic examination made later and smears made as a check on the former test. Gram negative intracellular diplococci in a field of 25 or more pus cells was regarded as proof of gonorrheal infection. A single negative smear does not always exclude the infection.

In women gonorrheal proctitis is ordinarily secondary to genital infection. The anus is contaminated by the infective vaginal discharge at defecation and the subsequent wiping. Other means are occasional factors but contamination at defecation is the usual one.

Symptoms. The outstanding fact is that usually there are few or no symptoms and but little if any evidence of gonococcic infection of the anus and rectum. This needs emphasis. Even to one making daily examinations of the rectum, the changes are usually slight if any are to be seen. Jullien's[10] dictum that "gonorrhea is a disease one sees only if one looks for it" is particularly true here. In one series of 88 cases investigated in 1931 only 12 (14%) presented any rectal complaint and 86% were symptomless.

To elicit any complaint direct questions are necessary. In 111 cases examined with the proctoscope, thirty-six (32%) on direct questioning stated that they had anal soreness, usually at defecation, only moderate generally; two patients were quite sore; and six had fairly severe pain, three of whom had anal fissure.

Slight *bleeding* was present in thirty-two (28%). Usually this was just a drop or two, or a streak on feces or a stain on paper. Several patients noticed blood only two or three times. The normal incidence of hemorrhoids in this group must be considered in this relation. The bleeding usually is noted a few days after or may accompany the onset of the rectal infection in a few cases it followed in a few weeks; in one, a month later.

The majority noticed their rectal soreness or bleeding within three weeks of the onset of the genital infection but several had no trouble until after the first month, some not until two to seven months later. In about a third the rectal infection occurs within the first few days of the genital disease, in another third in the first three weeks, and in the remaining third at various times up to several months after the initial infection.

Pus or mucopus occasionally may be seen on partial eversion of the anus by stretching the skin with the fingers but it is not seen often enough to be of any diagnostic value. Even if

present it is not often noted by the patient because it is small in amount.

Physical Findings. The evidences are few or absent. In a careful proctoscopic study of the 111 cases referred to there is no appearance of the rectal mucosa or anal canal which is characteristic of gonococcic infection, and no change in the crypts or elsewhere which is either pathognomonic or especially significant. In well over two-thirds of the cases there is no definite hyperemia of the mucosa. In 28% the terminal 6 to 10 cm. of the rectum was reddened. In two-thirds of our cases there was some, usually slight, reddening of the skin margin at the mucocutaneous junction. Mucopus, generally small in amount and often found as flecks or strings adherent to the bowel wall, was noted in seventy (63%); yellow liquid pus was seen in only six cases and was distributed over the last inch or last few inches of the rectum. I still feel this deserves emphasis: The presence of mucopus in the last inch or two of the rectum is the most suggestive finding in the diagnosis of gonococcic proctitis. It may be the only suggestion toward a diagnosis in a patient who states she does not have gonorrhea or its symptoms. In the ordinary proctoscopic examination this finding demands the examination of a smear. If in addition the skin at the anorectal juncture is reddened, a smear is even more definitely required. In the women who have a known genital gonorrhea obviously a smear should be made.

Diagnosis. The disease is consequently diagnosed not by physical findings but by bacteriologic evidence. Smear examinations will suffice in the majority of cases and this is a simple and practical method of diagnosis. However, cultural methods will pick up a definite number which would otherwise be missed. The work of Clements and Hughes, previously cited, gave the following results: Of 240 parallel tests (smear and culture) in 42 (17.5%) both smear and culture were positive; in 28 (11.7%) only the culture was positive and in 11 (4.5%) only the smear.

The course and treatment can be covered briefly. I have no doubt that it is often self-limited. But if it occasionally persists even in patients who have been treated as Brunet's figures show, it is probable it persists more often in undiagnosed and untreated cases. That it does persist at times for long periods is proven.

Considering now the usual course, an acute early phase may occur but that it is often absent is evident. The course is ordinarily slow, often of several months duration, but cure may follow adequate care in three to six weeks. Several weeks to months is probably the usual duration as many patients discontinue treatment before being cured.

The disease is a potential source of genital reinfection. Temesvary[11] states this does occur; Bickel and Abraham, that it occurs only rarely. My own opinion confirms that of the latter authors who state that "the significance of rectal gonorrhea lies in its being a possible source of infection of the genitalia." In itself rectal gonorrhea is usually not serious in the white races; in exceptional cases it may cause a stricture. Chronic inflammatory stricture is more common in negroes; some of these cases may be the aftermath of gonococcic infection but most of them are the result of lymphopathia venerea.

In the 111 cases, three had superficial fissure. Perianal suppurative disease was found in three cases, two had fistulas and one a short sinus communicating with an inflamed fibrosed crypt. In four cases the mucosa of the terminal rectum had a nodular surface, i.e., the early polypoid change which may result from chronic mucosal infection. Superficial erosions in small spots 1-2 mm. in diameter were observed in the mucosa just above its junction with the skin in four instances. Thus associated lesions were not frequent. No rectal or anal ulcers were encountered. Although a number of these cases were examined very early in the course of their genital and rectal infections the very severe cases described by some writers were not observed.

Treatment. Various procedures have been recommended for the management of the acute stage, e.g., rest in bed, a bland diet, hot sitz baths, anal douches, local medication and avoidance of instrumentation. However, the disease is not often seen in this stage. The patients in this series were treated by rectal instillations per catheter of 1 oz. (30 cc.) of 5% mild silver protein twice daily. If anal soreness was marked an ointment or suppository containing an anesthetic was employed. The bowels were regulated to avoid hard or liquid stools. Brunet uses a 2% silver proteinate cocoa butter suppository, prescribed after bowel movement and on retiring. This has proved quite effective and satis-

factory. Clements and Hughes used acriflavin irrigations with good results. Irrigating the anal crypts with a metal hook tip, freezing with ethyl chloride, and needless instrumentation should be avoided.

The patients having anal fistula were operated upon when the disease was chronic but while smears were still positive. The wounds healed normally.

CONCLUSIONS

1. Gonococcic infection of the rectum is a common complication of genital infection in women.

2. Because symptoms are mild and often absent, frequently the lesion is not diagnosed.

3. Urethra and cervix may be reinfected from a rectal gonorrhea.

4. Routine rectal smears should be made of all women with genital gonorrhea. Repeated smear examinations are necessary for diagnosis.

5. Complications are infrequent.

6. Treatment should be conservative.

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OVARIAN PREGNANCY

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Ovarian pregnancy, although considered by most writers to be more common than is realized, is still a very rare condition. In reporting a case it is always desirable to restate the criteria as set down by Spiegelberg:

1. The tube on the same side must be intact.

2. The fetal sac must occupy the position of the ovary.

3. It must be connected with the uterus by the utero-ovarian ligament.

4. Ovarian tissue must be found in the sac.

Conforming strictly to these criteria, Wollner[1] was able to find only eighty-seven cases in the entire medical literature up to 1932, of which forty-eight were definite. Since that time numerous cases have been reported, but most of them fail to include incontrovertible proof of the pregnancy being primary in the ovary. A search of the American and English literature from 1933 to the present disclosed seventeen reported cases, of which but four conformed to Spiegelberg's criteria from the evidence reported,

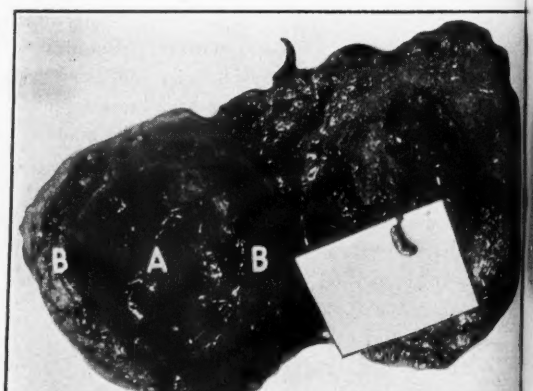

Fig. 1. Photograph showing fetus with placenta in situ on white background. (A) Amniotic cavity containing blood clot. (B) Ovarian tissue interspersed with organized clot surrounding cavity.

namely, those of Spackman,[2] Hyams,[3] Dodek[4] and Kanter.[5]

The case here reported must be added, we feel, not only because of its conformation, but also because of the unusually excellent specimen

with fully formed fetus. (See accompanying photograph.)

REPORT OF CASE

Mrs. C. Z., a white woman, aged thirty-six, was first seen in consultation April 28, 1938 complaining of excessive and frequent "menstrual" flow for the last three months. Family history disclosed three brothers and three sisters living and well, her mother living and well at the age of sixty-four, and that her father had died at sixty-three of heart disease. There was no history of familial disease. Patient had been married two and one-half years, had had no previous pregnancies, and had never employed contraceptives. Her past history revealed no serious illnesses, injuries or operations, except an appendectomy nineteen years ago. Venereal history was negative. The onset of her menses was at the age of sixteen, her periods were always regular, and the amount of flow average, until two months ago, since which time she had been flowing for two to three-week periods, with frequent passage of clots. She also complained of low back pain, made worse by exertion, since onset of menorrhagia.

Physical examination revealed the following positive findings: Blood pressure 130/90, pulse 96, temperature 96.8, respiration 20. There was a mass low in the midline, and on pelvic examination the uterus appeared enlarged three times its normal size. The adnexa were not distinguished. The laboratory reported her white blood count 10,300 and hemoglobin 65 per cent. Her urine was contaminated with blood from vaginal bleeding. A tentative diagnosis of uterine fibroid was made, and pelvic exploration advised.

At operation a mass 9x7x7 centimeters was found to occupy the position of the right ovary. This had an intact right fallopian tube wrapped about it and was adherent to surrounding structures. The mass was excised, accompanied by marked bleeding which had to be controlled with mass ligatures. The wound was closed without packing or drains. A urine specimen obtained at the time of operation, by catheter, gave a positive Ascheim-Zondek test. Postoperative course was entirely negative, as have been subsequent follow-ups, except for complaint of occasional low backache following protracted periods of standing (patient works in a bank).

Following is the report of H. D. Palmer, M. D., pathologist of Rockford Hospital:

Left ovary and tube.

Gross Description: The specimen is an irregularly but roughly oval-shaped mass which measures 9x7x7 cms. and weighs 337 gms. It is dark purple-red in color. The irregularities in contour are due to rounded areas of hemorrhage beneath an external serous membrane. At one extremity this membrane is ragged and torn, giving the appearance of having been detached from some other structure. On cross section the central area contains a typical amniotic sac 2.5 cms. in diameter, filled with bloody fluid and containing a fetus 7 mm. in length. The cord is still attached both to the fetus and to the amnion. The wall surrounding this sac measures from 1 to 1.5 cms. in thickness and presents wide areas of hemorrhage separated by gray tissue. The tube is stretched over one surface of this mass and measures about 1 cm. in diameter.

Microscopic Description: The sections present blood clot containing a number of chorionic villi, only a few of which are viable. The wall of the mass has the structural characteristics of ovarian tissue. It is markedly disrupted by hemorrhage.

Diagnosis: Ectopic gestation (ovarian).

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REGIONAL ILEITIS

With Report of Three Cases

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In contrast to appendicitis, which is now universally recognized as a surgical disease, the clinical entity commonly referred to as regional ileitis (Crohn's disease) represents a moot problem. This is evidenced by the diversity of opinions held not only by internists but also by a number of surgeons. The reason for this must be sought in the fact that regional (segmental) inflammation of the terminal ileum was discovered only recently, and that the observations recorded in the literature are not sufficiently numerous nor exhaustive to permit definite conclusions to be drawn. Under the circumstances it is felt that the presentation of the following three cases may add to our knowledge of this affliction. It may not be amiss first to review as briefly as possible the present-day concepts of its pathologic and clinical aspects.

PATHOLOGY

The lesion, described by Crohn in 1932, and confirmed by Oppenheimer and others later, was originally considered to be in the nature of an inflammatory condition of the terminal end of the ileum with multiple ulcerations and nonspecific granulomata, and only recently has been recognized as a disease entity involving not only the terminal ileum but also other parts of the ileum, jejunum, and even the colon, especially the cecum and ascending colon. It is further characterized by various skip-areas, so that one portion of the bowel may be perfectly normal, while two to six inches distant there may be

another inflammatory lesion. The disease may be acute, sub-acute, or chronic. The most common complication is a tendency to form fistulas which may terminate anywhere within the abdomen, perforate into various loops of bowel, the ischiorectal fossa, vagina and the like.

The histologic picture is that of an *acute inflammatory* process of the intestinal walls, involving all of the layers of the bowel, which become swollen and enlarged to one and one-half times the original size. The normal color is changed to a dull, lusterless, reddish gray, and the consistency simulates that of a rigid garden hose. The mucous membrane reveals irregular areas of ulceration and necrosis. The corresponding portion of the mesentery is thickened, edematous, and contains large, soft, hyperplastic lymph nodes. A variable amount of free fluid is usually present in the peritoneal cavity at this stage.

In the chronic or more advanced cases, the picture is entirely different, representing a chronic inflammatory process in the mucosa, submucosa and muscularis, with thickening of all the layers of the gut, and subsequent narrowing of the lumen. The contracted bowel begins to show evidence of obstruction within the ileum and the cecum, and may be associated with mesenteric abscesses and fistulas.

SYMPTOMATOLOGY

Regional ileitis most often simulates acute appendicitis, the striking symptoms being pain, cramps, a temperature of 99 to 101 F., leukocytosis, tenderness in the right lower quadrant, and the like.

The clinical picture is not always typical nor constant. At first, the only symptoms may be pain and diarrhea, which may last for a day or longer, resembling those of acute enteritis. Other patients may have periodic attacks of pain and diarrhea, with various amounts of mucus, pus, and blood in the stools. Still other patients may reveal an insidious onset, with signs of obstruction, pain, vomiting and distention. There are many variations, such as pain and vomiting, associated with chills and fever; or no pain, vomiting or diarrhea; in some instances the first sign may be a spontaneous fistula, which is strongly suggestive of the disease.

DIAGNOSIS

The diagnosis is made by the history of repeated attacks of pain usually predominant in the lower right quadrant, or along the ileum, associated with diarrhea, bloody or mush-like stools, attacks of chills, fever, nausea, mild leukocytosis and a variable degree of anemia, and the formation of fistulas in the abdomen or elsewhere. The diagnosis becomes more positive if x-ray examination reveals the string sign. Sigmoidoscopy rules out lesions of the colon as such (ulcerative colitis, tuberculosis, syphilis). In the chronic cases a palpable mass may be felt in the right lower quadrant which in the very young is almost impossible to differentiate from intussusception. In the event of perforation, abscess, generalized peritonitis, or fistulas may develop. These fistulas may communicate with the abdominal wall, the adjacent parts of the intestines or with other viscera.

DIFFERENTIAL DIAGNOSIS

It is difficult at times to differentiate regional ileitis from ulcerative colitis, as both have frequent intestinal disturbances and mucous bloody stools, though ulcerative colitis usually is characterized by more blood, while ileitis reveals more mush-like stools with mucus and blood, but this differentiation is merely a relative one. Both affections have exacerbations, remissions, and in both the bowel becomes thick and hose-like in shape. Both are resistant to treatment. A valuable aid in ruling out ulcerative colitis, when the disease is confined to the descending colon, is sigmoidoscopy. As was already alluded to, in the subacute and chronic types of ileitis when the disease involves the terminal loop of ileum, the x-rays show the characteristic string sign of Kantor.

Tuberculosis of the ileocecal region is the most difficult lesion to differentiate during laparotomy. It is very difficult in many cases to make a differential diagnosis between ileitis and ulcerative colitis, since ileitis does not exclude involvement of the colon, which accounts for the reason why some observers regard it as another form of ulcerative colitis. Very often the acute stage simulates an attack of appendicitis, and many normal appendices have been removed only to terminate in a permanent fistula, acute or chronic obstruction, generalized peritonitis, or even death. The diagnosis is difficult when an attack simulates acute appendicitis with perforation producing a pericecal abscess, as took place in one of my cases. However, this mistake should not occur, as the history usually reveals

that prior to the present attack the patient has had frequent intenstinal disturbances over a period of months or years, with frequent blood or mushy bowel movements, associated with vomiting, pallor, and loss of weight. If the patient happens to be a young adult with the above history and signs or symptoms suggestive of appendicitis, one should suspect this disease. Again, if a so-called appendiceal or cecal abscess appears in a patient having undergone appendectomy, and the patient still complains of attacks of pain and vomiting, that is to say without being freed from his symptoms by the removal of the appendix, ileitis should be suspected. It has been emphasized that in fifty per cent. of the cases requiring further surgical intervention for this disease the appendix has been removed without relief from the former symptoms.

In a considerable number of cases after surgical intervention there is a period of symptomatic relief, regardless of the nature of the surgical procedure, be that an appendectomy, a short-circuit operation, or even a mere exploratory laparotomy. This is unfortunate because the temporary feeling of well-being has given rise to the impression that spontaneous cure is possible. As a matter of fact, failure to observe these cases long enough or, in some cases, the freedom of symptoms for several years, does not preclude various complications and recurrences of the disease, while still others may die from causes other than the disease itself, or seek aid elsewhere. Study of the histories of many of these cases shows that remissions occur, regardless of treatment. In the obstructive type, a bland diet will temporarily give some relief, while a high residue or roughage diet will aggravate the obstructive symptoms. Since the disease is characterized by variable periods of remissions, and is often temporarily relieved by a bland diet and aggravated by a high residue diet, it is to be expected that in many cases a period of improvement follows almost any surgical procedure. Many inflammatory lesions of the bowel improve under a regime of starvation, rest, and bland diet, which usually precedes and follows a major surgical operation.

COURSE AND PROGNOSIS

There are reports that the disease may lead to a spontaneous cure, but usually it becomes chronic, with the tendency to perforation and death from generalized peritonitis or the formation of permanent fistulas.

TREATMENT

The treatment of the acute, subacute, or chronic type of this disease is excision of the entire diseased area. Whether it should be carried out in one or more stages depends upon the general condition of the patient and the character and the extent of the lesion, but the treatment must be radical removal. One must not overlook the so-called "skip-areas," and at least six inches of normal bowel should be included in the radical resection, otherwise recurrence is certain to follow.

There can be no controversy about radical surgery in the *chronic* obstructive lesions with or without fistula formation. Some surgeons have recently advocated a short-circuit operation, but this affords only temporary relief, does not remove the pathologic process, and does not prevent complications and the spread of the disease.

In the *acute* or *subacute* type the surgeon is confronted with an acute inflammatory condition of the terminal eight or ten inches of the ileum, showing that the condition is not acute appendicitis and rendering a decision difficult. The procedure should then not be restricted to appendectomy, as this is likely to be followed by a fecal fistula, a chronic stenotic lesion or perforation. It is wholly fallacious to return the diseased ileum into the abdomen after an exploratory laparotomy, as a resection of all of the diseased ileum and cecum should be performed at this time, if at all possible. It is only when the condition of the patient does not permit such a radical procedure that a transverse ileocolostomy may be performed as a first stage, to be followed a short time later by resection of the diseased ileum and cecum.

Certainly the cumulative evidence speaks decidedly against any form of conservative management, except as a temporizing measure when there are decided contraindications to any radical intervention.

CASE REPORTS

CASE 1—M. S., a school girl, sixteen years of age, admitted on my service at the Edgewater Hospital on July 26, 1933 by her family physician with a diagnosis of appendiceal abscess. The patient stated that on the day of her admission she was seized with a severe pain and cramps in the right lower quadrant with nausea and vomiting.

On admission, the temperature was 103 F.; pulse

130; white blood count 25,000 with 90 per cent. polymorphonuclears. Tenderness and rigidity was present over the right lower quadrant and a large mass about the size of a grapefruit was easily palpable. Owing to the serious condition of the patient, the usual conservative management was instituted—Fowler's position, ice bags to the abdomen, nothing by mouth, saline and glucose infusions. After several weeks of localization, the abscess was drained. The patient left the hospital two weeks later greatly improved, but with a discharging sinus. The sinus failed to heal and the patient continued to have attacks of pain in the right lower quadrant, associated with vomiting and frequent bloody stools. In questioning the patient further at this time, she admitted that she had been suffering from these cramp-like attacks of pain for four years prior to her entering the hospital, and had lost considerable weight. It was at this time that a diagnosis was made of perforation of a regional ileitis simulating an appendiceal abscess. After a short period the patient developed a second fistula, which opening was just above the left of the umbilicus. The fistulae were injected with iodized oil, and x-rays revealed their extension into the region of the terminal end of the ileum.

The patient reentered the hospital November 21, 1933, when an attempt was made to relieve her of the obstructions, and to dissect out the fistulae. At this time, the exploration revealed the following: A large indurated mass about the size of a large orange involved the head of the cecum, a sinus extended down to the terminal ileum, which was thickened and hose-like in appearance for a distance of twelve inches. The sinus extended above the umbilicus and ended about sixteen inches from the ileocecal valve, at which point a perforation had produced a secondary obstruction. The sinus was resected together with this portion of the ileum and an end-to-end anastomosis performed. Because of the patient's poor condition, nothing further was done. She left the hospital two weeks later much improved.

Pathologic Report: The ileum is intensely congested, 30 centimeter long; the mucosa intensely engorged. Wall hemorrhagic. Portion of omentum is included. Microscopically the mucosa is ulcerated, the wall densely infiltrated with polynuclears.

Pathologic Diagnosis: Acute inflammation of the ileum (ileitis).

The patient reentered the hospital June 26, 1934, still complaining of cramps, attacks of vomiting, bloody stools, distention and other signs of intestinal obstruction, which were confirmed by x-ray examination. Under ethylene anesthesia a wide resection was made of the ileum, cecum, and a portion of the ascending colon and ileocolostomy performed. Because of the patient's poor general condition, and the presence of massive adhesions, it was not considered wise to resect the ascending colon, though it appeared indicated. She was given a blood transfusion, her condition improved, and she left the hospital after two weeks with no discharging sinuses, and with no evidence of intestinal obstruction.

Pathologic Report: Portion of ileum and cecum consist of an indurated mass about 8 centimeters in diameter. The sinus extends to the ileocecal juncture; the terminal ileum is stenosed admitting a small finger; the ulceration extends at the ileocecal juncture for 4 centimeters; an ulcer 2 by 1 by 1 centimeter being at the base of the juncture. The appendix is 8 centimeters by 8 millimeters in diameter; no ulceration. The wall of the ileum is markedly thickened.

Microscopically, the ulcer is lined by granular tissue; submucosa and muscularis are thickened and densely infiltrated with plasma cells; few polynuclears.

Pathologic Diagnosis: Chronic inflammation of the cecum and ileum with ulceration.

The patient was kept under constant observation for three years, during which time she gradually developed a stenosis at the site of the stoma because an insufficient amount of the ascending colon as well as of the ileum was removed during her last operation. She was prepared to enter the hospital for a further resection and relief of her obstruction.

The patient reentered the hospital February 5, 1938, at which time the entire ascending colon and another ten inches of the ileum were resected, and a lateral ileocolostomy of the transverse colon carried out. The patient left the hospital after two weeks of an uneventful convalescence. Since that time she has been perfectly well and symptom-free. She has now only one bowel movement a day by regulating the amount of fruit juices and the residue in her diet. She has gained in weight, strength, and for the first time since the onset of her symptoms, which dates back almost ten years, feels perfectly well.

Pathologic Report: Resected bowel (40 centimeters) presents one portion 7 centimeters long with a thickened wall and superficial ulceration. Wall measures 4 by 6 millimeters thick with lumen narrowed considerably.

Microscopically, the mucosa is ulcerated; the submucosa thickened and densely infiltrated with round cells, few polynuclears. Muscularis and serosa are less densely infiltrated.

Pathologic Diagnosis: Chronic non-specific ulcerative colitis.

Case 2—concerns a former colleague, aged 30, whom I saw as a consultant. He entered Mercy Hospital April 26, 1932, suffering from a sense of fullness in the upper epigastrium, abdominal cramps, nausea and vomiting. Later the pain gradually became localized in the right lower quadrant and radiated down the right thigh. The patient stated that he had had several milder and similar attacks during the past two years prior to his admission to the hospital. There was no diarrhea, no hematuria, no lumbar pain, his white count was 13,000 with 80 per cent. polynuclears. A diagnosis was made of acute appendicitis. The appendix was removed by the attending surgeon and a laboratory report read "acute suppurative appendicitis." One week following the operation, the patient developed signs of intestinal obstruction and the formation of an abdominal abscess. Incision of the abdominal abscess and ileostomy were performed. The patient left the hospital in an im-

proved condition May 25, 1932, with a discharging fistula.

He reentered the hospital June 26, next, for repair of the fistula, and at this time a resection of the ileum was performed and an end-to-end anastomosis was made.

Pathologic Diagnosis of the resected bowel was: fibroplastic reaction due to fibro-peritonitis and chronic inflammation of the ileum.

About one week later (July 3rd, 1932), the patient began to develop symptoms of intestinal obstruction, and on that date ileostomy was performed and the ileum anastomosed to the transverse colon.

On August 6, 1932, repair was attempted of the fecal fistula which was resected down to the colon, and another ileocolostomy with the transverse colon carried out. The patient finally left the hospital with a discharging and functioning ileostomy.

In 1934, he entered the Mayo Clinic and at that time the ascending colon, part of the transverse colon, and all of the diseased segments of the ileum were removed, and a new ileocolostomy performed, after which the patient has been symptom-free and in good health.

CASE 3. R. S., a male infant, twenty-one months of age, was referred to my service at the Edgewater Hospital, January 30, 1939, by the attending pediatrician with an admitting diagnosis of acute intussusception. The child had a temperature of 99.4 F., pulse 120, bloody mucous stools, vomiting, and a palpable mass in the right lower quadrant. The patient was operated on shortly after his admission. Under gas-ether anesthesia, a right rectus incision was made, and the cecum, ascending colon, and the transverse colon were found to be moderately distended. The ileum, for a distance of about eight inches was thickened, injected, soft, and mush-like in appearance. The normal folds were entirely obliterated, and the ileum was moderately dilated. The mesenteric glands were grouped in masses which gave one the impression of a handful of grapes; these glands were hard and bunched together, producing in this region several masses the size of walnuts. The mesentery of the ileum, cecum and ascending colon was markedly injected. The appendix was large and edematous, measuring ⅜ of an inch in diameter and four inches in length. Free peritoneal fluid was present in the abdominal cavity. This pathologic process was explained to the attending pediatrician, but because of the age of the child, he refused to permit anything but an appendectomy at this time, stating that if at a later date, obstructive symptoms should develop, further surgical treatment would be permitted.

Pathologic Report: Appendix, 8 centimeters long, 5 millimeters in diameter. Serosa engorged. Mucosa markedly injected, thickened, wrinkled, almost polypoid. Microscopically the mucosa reveals marked hyperplasia of lymphoid tissue; the follicles are enlarged with the center revealing many polynuclears. The serosa contains foci of round and a few polynuclear cells.

Pathologic Diagnosis: Subacute appendicitis (secondary).

The child made an uneventful recovery, leaving the hospital after ten days, and up to the present time (8 months) has had no recurrence of its former symptoms.

DISCUSSION

The treatment of this disease is surgical, and when a definite diagnosis is made, a careful search of the diseased areas of the bowel, including the ileum, jejunum, and the colon should be instituted, and then a complete resection of all of the diseased bowel should be done. This, of course, may be performed in a number of stages until no diseased bowel remains, depending upon the prevailing condition at the time which will determine whether the operation should be performed in one, two, or more stages. I do not agree that looping or short-circuiting of the bowel to divert the intestinal flow is to be considered as a permanent cure, but concede that it may be done as a preliminary or temporary treatment to be followed by radical resection at a later date. To merely short-circuit the bowel, and leave a diseased portion of the gut active, renders the remaining portions of the bowel more vulnerable to infection, ulcerations, and granulomata, which will be followed later by obstructions, fistulas, perforations, and perhaps death. On the other hand, proper radical surgery at the time of the initial operation will lend itself to a rapid and permanent cure, and a great reduction in mortality and morbidity. To this should be added the avoidance of needless operations which usually follow faulty initial surgical procedures. There is no question that in the chronic obstructive cases resection must be performed and the obstructing lesion and diseased segments of the bowel removed. But, in the acute inflammatory conditions of the ileum, when the appendix is removed only after a diagnosis of acute segmental ileitis has been made, a radical surgical procedure should be performed either as a one or two-stage ileo-transverse-colostomy, with removal of all of the diseased ileum and the ascending colon. It is in these cases that the subject is so much debated, because it is believed by a number of observers that the amount of mesenteric involvement is a guide to, or a determining factor in the spontaneous cure of these cases. If these cases are observed long enough it will be found that there is no medical treatment for ileitis, and that eventually all of the true cases of terminal (segmental) ileitis will be followed by signs of obstruction with its various complications, which

will necessitate multiple major surgical procedures.

It will be noted that the first two patients I have had under observation gave definite histories of previous attacks, one of having repeated attacks four years prior to being admitted to the hospital, and the other of having attacks of pain two years prior to hospitalization. In the first patient the tentative diagnosis was localized peritonitis with abscess formation following perforation four years after her initial attack, with a morbidity over a period of eight years and four operations with multiple resections before effecting a cure. The same observations are noted in the second patient—a morbidity of about five years and a series of multiple resections, colostomies, etc., before effecting a cure. If a correct diagnosis had been made at once and resection of the ileum and ascending colon with a transverse ileocolostomy had been performed at that time, one or two operations would have been sufficient with a morbidity time of four to six weeks, as against four to six years.

Even the twenty-one month old infant on which I was unable to perform a major surgical procedure because of failure to obtain authorization, eventually will be forced to undergo similar operations as in the other cases. Due to the fact that the infant is practically reared on a very soft and very bland diet, the return of the symptoms may be delayed, but as the residue increases and as the infant continues to grow, it will eventually develop signs of intestinal obstruction, and resection of the diseased area will have to be performed.

Spontaneous cures have been recorded by some authors, who did nothing but return the ileum into the abdomen after exploratory laparotomy. Such cases have not been observed long enough, since very often they get out of control and end up in other institutions, or die from perforation, generalized peritonitis or other causes.

Meyer reported a series of four cases of acute ileitis which he either left alone, performed a short-circuit operation, or resected the ileum. Since his article was published, he informed me that in the follow-up of the cases he had treated conservatively, one had to undergo an operation two weeks later for obstruction, another was operated upon two years later for an obstructive lesion, while his third patient found his way to the Mayo Clinic, where a resection was performed, and the fourth patient has been lost sight of. He concedes that in the acute cases in which the question of radical surgery procedure seems debatable, the best results now are obtained when radical resection is performed at the time of initial operation. Such a procedure offers the best chance for a permanent cure.

No medical management has been found definitely to cure segmental ileitis. However, since some success has been reported in the treatment of ulcerative colitis with sulfanilamide, it may be attempted by those who believe in conservative management when in the early stage of the disease the mesentery and its glands are not greatly involved or where no obstructive lesion is present. However, conservative treatment, including appendectomy, has proved fruitless in over fifty per cent. of the several hundred reported cases that had been subjected to appendectomy, and since the other fifty per cent. of the cases eventually develop some complication or chronic stenosing lesions, it would seem that conservative treatment has no justification except through dire necessity. We are confronted at this time with the same problem that the profession faced years ago in the treatment of acute appendicitis, when the accepted belief was that the appendix had to suppurate or become ripe before the surgeon should attempt operation. It remained for Deaver, Murphy and others to show the necessity for the appendix being removed within the first 24 to 48 hours of an attack. Likewise, if the great number of cases reported in the literature, as well as my own cases, mean anything, they demonstrate the fact that eventually all come to require further surgical intervention when the diseased segment has not been removed, and that conservative treatment, although it may render the patient free from symptoms for a period of one to five years or even longer, rarely if ever affords permanent relief. On the other hand, there is absolute evidence that under conservative management many patients have died, or mutilating operations had to be performed when resection, a comparatively simple procedure in the hands of a skilled surgeon, would prove all sufficient. It is at the early stage that radical surgery will not only afford the greatest relief but assure complete recovery in the shortest time without incurring the risk of serious complications.

It may be held that a number of observers

have reported cures of acute ileitis by simple appendectomy, but as their observations have not extended over five years, there is no assurance of a cure. At least ten years will have to elapse without recurrence before one can speak of an actual cure.

SUMMARY

1. Regional ileitis is an acute, sub-acute, or chronic disease of the terminal end of the ileum, but may involve any part of the small or large bowel.

2. In the acute stage the disease often resembles an attack of acute appendicitis, but the history shows repeated attacks of intestinal disturbances characterized by mushy or bloody stools.

3. In the chronic stage variable signs and symptoms of partial intestinal obstruction manifest themselves, which reveal characteristic x-ray findings, with resulting fistula and other complications following perforations.

4. The treatment for both the acute, subacute or chronic stage of the disease should be radical removal of the diseased segment of bowel either in one, two, or more stages, depending upon the condition of the patient.

5. The youngest case ever reported is that of a twenty-one-month old child, on which I was prevented from doing more than an appendectomy for the time being.

6. There is no medical treatment for this disease. Recognition of the fact that radical surgical intervention is the only means to a cure will tend to reduce its present morbidity and mortality rate.

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THE MENTALLY HANDICAPPED CHILD

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Most normal human beings show more or less sympathy for crippled children. Whether lamed by birth or disease, the broken bodies of youngsters stirs our compassion to action to help them in every way possible; to restore them sufficiently to compete, in some measure, with the more fortunate in physical health and to make their lot in life happier. In this great country of ours, with its population of 130,000,000, there are well over 300,000 such handicapped children. But in our democracy, where the life and limb of the individual is sacred and of first importance, much has been done for these unfortunates. There are special hospitals manned by experts, devoted exclusively to the mending of crippled bodies. There are schools staffed by specialists

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whose sole purpose is to train lame children in useful occupations to overcome their handicaps.

The money and efforts spent along this line have paid handsome dividends in material benefits and happiness to the crippled children, their parents and the taxpayers. Illinois may well be proud of her leadership in this work, and so well is it done that there are now more places for the care of the crippled than there are such children to enjoy them.

As good as this may be, there is, unhappily, another and darker side to the handicapped child problem. It is of greater social and legal importance and concerns itself with children born with limited intelligence—the so-called mentally handicapped children. Intelligence is an important factor in health, success and happiness of the individual, and its deficiency accounts for some of the disease, dependency and delinquency and the entailed failure, unhappiness and distress in every civilized community.

What is a mentally handicapped child? There are other names given this condition that may sound more familiar, such as mental defective, feeble-minded, weakminded, backward, subnormal and dullwitted. They all mean the same thing, namely, that such children have minds whose growth does not correspond with or lags behind the normal years of age. They are children who are slow in learning if they can learn at all. They are usually several grades behind the required school work of our standard educational system because of delayed or arrested development of the intelligence. Thus we have often a picture of a full grown boy or girl directed by the mind of a child.

There are various grades of mental retardation. The lowest grade has an intelligence that never reaches higher than that of the normal child of three. These are hopeless and as long as they live will need the care usually given a child of such age. There are others who never reach beyond the age of seven in intelligence. These may be taught to do simple errands and other tasks about the home, may be able to guard against common physical dangers, but are generally incapable of earning a living by useful work. These need watchful care, especially the more grown girls, who, because of their mental deficiency but developed bodies, may be easily led into moral delinquency. These too often become hard to manage in the home and require institutional care.

There is a large group of mentally handicapped children of a less serious nature from the standpoint of mental deficiency, yet constitutes a vital community problem because the mental range of these children is from subnormal to dull normal. They rarely get beyond the fifth or sixth grade in school and soon reach working age with this little education. As these children grow to adult age without special schooling or care they usually enter the unskilled labor class, and may be able to earn something towards self keep. They can do supervised manual labor not requiring involved reasoning. They are able to care for animals, do farm work and run simple machinery. They possess little or no initiative, do little planning for the future, nor can they hold a position of responsibility. They are not completely fitted by nature or nurture for ordinary community life. Some of these persons may appear more intelligent on the surface than they really are, and may even convince employers to be given work requiring reasoning powers, but it is not long before the true intellectual grade is revealed and they are soon discharged for inefficiency. Thus we find certain of them always out of work. In order to live they must lead a more or less parasitic existence, that is, living for the most part off of parents, dole, or the goodness of other persons. We must remember that the subnormals tend to develop antisocial outlooks and unsound habits as a result of the treatment received at the average public school. We must keep in mind that the subnormal is guided more by impulse than by reason. He is unable to resist temptation and too weak in judgment to have the full concept of right and wrong or to understand fully the difference between mine and thine. Mix this with a full dose of idleness and we have a potential source of social evil and misconduct. They do get into trouble frequently and repeatedly because they are too stupid to be deterred by punishment. The weakminded are not born bad. They are individuals who lack the restraints demanded of all persons in their social group, and they break the commandments not because they are vicious but because they know no better. Concretely, a grown man of 25 years of age with an emotional control of a child of seven, acts, thinks and feels like a child of seven, and we can expect little more from him in mental

ability and morality than from a child of that age.

There is an alarming number of mentally handicapped individuals in our midst and we must not shut our eyes to the importance of the condition, nor minimize the steps to be taken to control and improve the situation. It may astonish many of you to learn that the United States has 850,000 children of school age who are definitely feeble-minded, determined to be so by standard psychological tests used to grade intelligence. The appalling fact is that 5,650,000 children of school age are estimated to be borderline subnormals. It is startling but true that 2 per cent. of the total U. S. population suffers from varying degrees of feeble-mindedness, and that 2 out of every hundred of all children of school age are in need of institutional care or some form of special education. Add to these figures the great army of epileptics, of whom there are some 14,000 in Illinois alone. These unfortunates because of their fits cannot pursue a gainful occupation for long, nor will they be hired if known to have this sickness.

Of course the ideal way to deal with the whole situation of the mentally handicapped, whether it be feeblemindedness or epilepsy, is prevention. But this is another matter. All that can be offered at this time is ways and means to better the condition as it exists right now. It is evident that there is a greater need for special attention and guidance of the mentally handicapped than that required by normal children. Patience and skill are necessary to bring out and make the best use of their limited mental faculties. The goal should be to discover these slow-witted children as early as possible, understand their shortcomings, straighten out their mental kinks and to aid them to become economic and social assets instead of liabilities. To put these children in public institutions merely to put them out of circulation is but a makeshift. In spite of lay opinion to the contrary, many backward and dull children can be made fairly safe and useful citizens, even if they cannot be restored to normal.

While it is true that some institutions for the feebleminded are doing good constructive work in their special field, many of them are overcrowded and are merely giving custodial care, ignoring most of the required scientific study of their charges. It is regrettable that Illinois, where such splendid service is afforded the physically handicapped, is behind in type and quality of service offered the mentally handicapped in other states. What we need here is the working colony system, away from the institutions, where the inmates live in cottages approximating home surroundings. States having this advanced method of handling the educable mental defectives report it as quite successful. The products of the labor of these persons is not only a source of revenue, but contributes to their keep and relieves in part the burdens of the taxpayer. It is urged that all who can should talk with the local state senator or state representative to support legislation fostered by the committee for the study of the mentally handicapped children to enable the building of the cottage system of colonies for the teachable feebleminded.

It is obvious that the mentally handicapped cannot make progress under our ordinary school teaching. They need intensive training in artisanship best fitting the mind of the patient. This is best done under colonization where useful work and right habits can be persistently drummed into weaker minds and made to stick. The key to the successful education of the mentally handicapped is patient, skillful training under such favorable environment as is afforded by colonization. It stands to reason that this important social and economic problem can be successfully met if you, the great and sympathetic audience, will do your share toward the establishment of the colony idea, to the great advantage of the mentally handicapped and the greater glory of humanitarian Illinois.

PERIODIC PARALYSIS

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Definition

This disease is primarily a familial condition with exceptional sporadic specimens characterized by recurrent attacks of flaccid paralysis of striated muscle with loss of tendon reflexes, and abolition of the electrical reactions (Ford). Between the attacks there is practically no indisposition and no indication of any abnormality existing in the individual, except for a mild developmental retardation in young children. The child

may not walk nor talk early, but these functions do develop progressively.

Historical Aspects

Da Costa, in 1870, spoke of intermittant paralysis, giving symptoms similar to those associated with the present conception of periodic paralysis, and was impressed with the mystery of its cause, promulgating the theory that this type of paralysis was due to certain "poisons" outside of, or within the body.

Back in 1903, Holtzapple referred to this condition in these words: "Much has been written lately on the subject of periodic paralysis, yet it remains a disease which is unique in its manifestations, obscure in its pathology, and of rare occurrence." He further states that in the twenty years preceding his written account the disease was not considered serious, and deaths attributed to this condition had not been reported. However, he had accounted for several deaths in one family under his observation occurring during an attack. He further stated that other members of the same family suffered periodically from "sick headaches."

Etiology

Over ninety per cent. of the cases are familial, and inherited. The disease may affect several members of one family. Disturbance of metabolism, or endogenous intoxication of unknown nature may be the causitive factor. The disease may skip one generation and appear in several members of the next. It may be transmitted through either parent, and if absent in the preceding generation, the parent may have suffered from paroxysmal "headaches." The condition ordinarily is not present until the fifth year of life or later. Males are affected twice as often as females. The attacks may be precipitated by excessive exertion, overeating, or rich food. The attacks last several hours, or may be from one to seven days in duration. It is suggested that the initial cause of this condition may be an acute infection, or one of the xanthemata. However, this has not been proven in very many cases. Atwood states that "Attacks are probably due to the circulation of some toxic substance acting upon the periphery."

Morbid Anatomy—Pathology

Present day theories suggest that there is a sero-chemical reaction about the neurone synapse in the anterior horn cells. The emphasis at present is on the suggestion, that the sero-chemical reaction is due to an accumulation of toxins or a progressive chemical change, due to a glandular disturbance of acid-base equilibrium in the body. There are no uniform or characteristic changes in the muscles (Ford), but several authors agree that there are definite changes in the muscle bundles of the muscle groups most commonly affected. There is said to be an infiltration of connective tissue and fatty degeneration of the fibres themselves. Histologically the muscle cells are extremely friable. Progressive atrophy or dystrophy of muscle groups is mentioned by several men who performed post-mortem examinations on diagnosed cases. Holtzapple mentions that late in life there is a gradual wasting of the shoulder-girdle and pelvic-girdle muscles as well as the leg muscles. Favill quotes Neustaedter as summarizing the pathology in this manner: "The place of the lesion is indisputably in the muscles, but its character and modus operandi are still not demonstrated." Urine examinations during attacks have shown increased acidity, increased indican, slightly positive albuminuria, and increased sulphate partition.

Symptoms of the Attack

Attacks may be frequent, or may occur once or twice in a long life. Attacks may always be mild, or always severe, or may vary in severity in one individual. During the prodrome there may be excessive thirst or hunger, and a feeling of numbness or tingling in the extremities, and the onset is almost always at night. The patient may awaken after a night's sleep to find that he is more or less completely paralyzed. The weakness begins, as a rule, in the legs, then extends to the arms and finally involves trunk and neck. In general, the proximal muscles are affected first. The cranial nerves are rarely affected. The diaphragm almost always escapes paralysis, although it is assumed that this may be considered the dominant factor when death does occur during an attack. Disturbances of speech and swallowing are probably due to respiratory distress produced by paralysis of intercostals and accessory muscles of respiration which are affected. There is no loss of consciousness nor sphincter control. The paralysis usually affects muscle groups, and the extremities may be in-

volved to produce a monoplegia, diplegia, hemiplegia or quadraplegia.

There is a complete loss of irritability of the muscles; electrical and mechanical stimulation provokes no reaction. In severe attacks all writers agree that there is definite dilatation of the heart and usually functional murmurs occur which disappear when the attack has subsided. The pulse may be feeble, slow, or irregular, with respirations rapid and shallow. Constipation or even obstipation is a consistent symptom during the attacks. Profuse sweating and decreased micturition or annuria is a common clinical feature. There is no fever, but a subnormal temperature is usually noted. Due to the labored breathing, deep breathing, cough and vomiting are practically impossible. There are no sensory symptoms and pain is absent but there is a sense of heaviness and a tired feeling which becomes very annoying to the patient, making him irritable and fretful.

Association with Other Diseases

In two instances, symptoms similar to those of periodic paralysis have occurred with Basedow's disease, but the paralysis was very mild and the interval of periodicity was irregular.

Holtzapple and Ford place emphasis on the association of this disease with hereditary migraine.

Differential Diagnosis

The only disease from which this must be differentiated, because of its periodicity is epilepsy, and the flaccid condition of the muscles without loss of consciousness are diagnostic features.

Diagnosis

The history and observation of recurrent attacks of weakness or paralysis gives a definite diagnosis. If the family history divulges other cases, the diagnosis is strengthened. If the electrical reaction of the involved muscles is lost during an attack, the condition may be pigeonholed as periodic paralysis.

Prognosis

Attacks become less frequent after middle life. Death is infrequent during attacks but has occurred. True atrophy (Grinker) or dystrophy of the muscle groups repeatedly affected has been rather consistently demonstrated. Some of the patients contend that forced exertion aids materially in hastening improvement or in warding off an impending attack. The first symptom of improvement is simply the ability to produce slight muscular contraction here and there, and complete control usually returns quite rapidly. In females the attacks cease when the climacteric is reached.

Treatment

(Ford) recommends low protein diet, a large quantity of fluids, and restriction of exercise. (Holtzapple) suggests bromides and rest. (Pollock) uses potassium chloride in large amounts with administration of whole thymus gland. Most men agree that mild sedation and catharsis is in order during the attacks.

Summary

1. Periodic paralysis is a rare hereditary disease, occurring usually in several members of a family and occasionally in sporadic instances. It begins in childhood.

2. A typical attack of this peculiar paralysis is characterized by periodic flaccid motor paralysis involving some or all of the voluntary muscles, except those of the face, eyes, tongue, organs of speech, of deglutition, and of the sphincters of the rectum and bladder.

3. The paralysis may be partial or complete, general or localized, transient or recurrent, during an attack or constantly present for the duration of the attack.

4. Definite pathological changes are not known.

5. The patient is usually perfectly normal between attacks.

CASE

Case History

The case I am showing tonight presented itself at my office on March 4, 1938. The child is of American parentage, but was born in Paracale, in the Philippines. He is the third of three living children; the other two children giving no evidence of this condition. There is no family history on either the mother's or father's side of any paralysis of this type having ever occurred, and no history of migraine. The child was a normal full-term moderate-labor delivery, with no evidence of birth trauma or prenatal injury, but after delivery he had difficulty in breathing for several days. However, within two months after birth, the child had a convulsion without apparent provocation and four or five convulsions did occur during the following five months at irregular intervals, and all without apparent cause. X-ray plates, taken in Manilla, of the thymus gland

revealed considerable enlargement of the thymic shadow. At nine months of age he received three x-ray treatments to the thymus gland. Within two weeks' time the first attack of paralysis occurred involving the right arm and leg and lasted two days. After this first attack the recurrences came at regular intervals of eighteen days and lasted from one to three days, the first day of each succeeding attack being consistently eighteen days from the first day of the preceding attack. When he was twelve months old pictures of the thymus disclosed an apparent recurrent enlargement of the gland. He received a second series of three x-ray treatments to the thymus. After this the interval between paralytic attacks was shortened to fourteen days, and some of the attacks lasted from five to six days. Further than this, some of the attacks involved all four extremities, which had not occurred previous to the second series of the three x-ray exposures. This was the status of the case when I saw the child at sixteen months of age.

Physical Examination

On physical examination I found the child to be a well-nourished normally developed white male, sixteen months of age, who could sit up but not stand. He made efforts to talk and seemingly understood simple things that were said to him. He was quiet and friendly during the examination, so I requested the mother to bring the child to my home one day before the attack was due, and permit me to observe all phases of the attack first hand. This particular attack was preceded by a day of fretfulness and irritability and came on probably during the night, because it was present the following morning involving the right arm and right leg and lasting three and one-half days. The reflexes of the parts involved were absent; there was no response to electrical stimulation of these parts but sensitivity to pain was present. There was no disturbance of sphincter control but the child was constipated, as he is during every attack. He ate fairly well but had to be coaxed to start eating. On the fifth day, the flaccid paralysis was gone and the child was bright and happy again, having retained no evidence of any abnormal state. A succeeding attack produced paralysis of the opposite arm and leg, and also a complete paralysis of both arms and legs for one day of this second observed attack. When the quadraplegia was present there was difficulty in swallowing.

Treatment

Epileptic management with ketogenic diet did disturb the interval of periodicity, a remission of nineteen days occurring at one time. Hospitalization and laboratory work-up produced the impression that the body chlorides were diminished; there was no other deviation from the normal. Large daily single doses of potassium chloride were given and soon after administration, increased awareness and vivaciousness were noted. The attacks were definitely less severe but they lasted longer.

For the past three months whole thymus gland has been given daily, and definite reduction in the severity of the attacks was observed. A new development is the transient character of the paralysis in the last ten or twelve attacks. That is, a paralysis is present in one arm, or arm and leg, for possibly a day, or a day and one-half, and then the function of one of the paralyzed members may return for a day, and then be lost again for one or two days before the termination of this attack. When function returns, the child uses the arm and fore-arm, thigh and leg for a period of occasionally one or two days, before he can move the fingers and toes.

Today the child attempts to walk alone, talks, has gained and looks very well. He is going back to the hospital for further blood chemistry study the end of this week.

This case being sporadic and not familial falls in the rare eight or ten per cent. of a disease which is in itself very uncommon.

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POSSIBLE CAUSE OF MALFORMATIONS AND SPONTANEOUS ABORTIONS

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Ever since the investigations of R. and Paula Hertwig regarding x-ray irradiation of the ova of echinoderms which results in malformations there has been an increasing experimental evidence that various chemical and physical injurious agents damaging an ovum or a spermatozoon may bring about a malformation or a monstrosity. There was, and still is, a gap between the experimental evidence on animals and human pathology. In most cases of human tetralogic cases there seems to be no immediate evidence of any abnormal chemicals used, except possibly the ones applied as the spermatocidal birth control agents, nor any exposure to a sufficiently powerful destructive ray or some such physical agent. It is evident that the cause of malformations must be universal, acting equally on man and on animals.

The epoch making popularization of ovulation time by Knauss and Ogino, known to embryologists for over a dozen years previously, but not properly evaluated by them, offers a chance for another speculative attempt to explain the cause of malformation in humans, and, possibly, a means to prevent the occurrence of these unhappy fruits of labor in the future.

It seems possible that a monstrosity or a malformation is the *result of the fertilization of a dying ovum* by a normal spermatozoon or, less likely, the result of the fertilization of a healthy egg by a dying spermatozoon. The first possibility appears more likely, because the ovum, according to the prevailing current concept, has a very limited span of life, some forty-eight hours or less, whereas the life span of a spermatozoon is seventy-four hours. Watching any protozoon die under a microscope—an ameba or a flagellate, for instance—one notices that it does not die at once and in all parts at the same time. Some parts survive much longer than the others. If, therefore, an egg is impregnated by a spermatozoon at, say, forty hours after extrusion, when it is on its last—is almost dead—a grave malformation may result. If the egg is but slightly damaged by the process of its rapidly approaching senility one may expect a slight malformation of one part of the body of the fetus. If the ovum was all but dead at the time of fertilization one might expect not only a malformation but a dead fetus unable even to go through the stages of intrauterine development.

This explanation seems to be in agreement with the current concept that a good proportion of spontaneous abortions are cases of grave malformation and monstrosities and will also explan why we have so many pregnancies (about 25 per cent.) never reaching the term or ending in stillbirths.

One is tempted, then, to make a few interest-

ing calculations. If we add the percentage of spontaneous abortions and stillbirths, the percentage of nonviable grave monstrosities, such as anencephalus, spina bifida, etc., and the percentage of less extensive malformations, such as harelip, deformed toes or fingers, clubfeet, etc., one would roughly estimate them to reach the level of one-fourth to one-third of the total pregnancies. Assuming, as we do, that most (if not all) of these cases are due to the senility of the ovum, one comes to the conclusion that, possibly, the last one-quarter or the last one-third of the life span of the ovum (12 to 16 hours after ovulation, plus two to three hours for the spermatozoon to reach the ovum) constitutes the dangerous period when fertilization ends in a catastrophe. If this dying ovum is not allowed to be fertilized we shall eliminate malformations, if the proposed theory is correct.

It is possible that the child resembles the parent whose sex cell happened to be in better shape at the time of fertilization.

One may assume that the superior human being is the result of the well timed union of a fresh but fully matured spermatozoon with an ovum at the vibrant peak of its vitality. The rest of us, average humans, are the results of at least one parent cell being moderately stale, indeed very stale in some instances.

While the ultimate solution of the problem requires a good deal of investigation we have been able to obtain partial proof of its plausibility. It seems to be well established that the rabbit ovulates only during sexual exposure. We should, then, have very few, if any, malformations in rabbits. We have canvassed, therefore, a number of local rabbit breeders. Out of a total of about 20,000 rabbits bred we were able, so far, to obtain only one reasonably sure case of malformation—a bunny with two tails. It appears, therefore, that malformations in rabbits, where the ovum is impregnated quite soon after the rupture of the follicle, occur very seldom.

We are not regarding the spermatozoon with the same grave suspicion. The spermatozoon has no bulky cytoplasm which is apt to undergo the slow process of deterioration. Its life span is longer. But we must not absolve this agent completely. In experimenting with the action of the x-ray on spermatozoa, as we have done, one observes that their motility is not visibly impaired even after exposure to very heavy doses of the rays, the doses which should destroy its vital properties quite radically.

If the above line of reasoning is correct how can one hope to prevent malformations in humans? The answer seems to be simple, even though its immediate practical application is not easy at all. One should not expose the dying egg to fertilization. And if the woman knows when she ovulates (and many women claim to know this exactly), *she must not expose herself during the next two days.* It is in the two following days, probably about thirty-six hours after ovulation, that the ovum becomes old, senile, and supposedly begins to deteriorate.

At least as far as the majority of malformations are concerned, the explanation offered seems to be entirely plausible. The problem is of such tremendous importance for all of us that even though the above concept lacks direct and conclusive proof it is presented here in the hope of promoting further investigation by others better provided with facilities for research. The final solution, however, will not come from the laboratory but from clinical evidence, from actual life.

SUMMARY

It appears possible that most spontaneous abortions, stillbirths, monstrosities and malformations might be due to the fertilization of a dying ovum, which has, apparently, a very short life span, about forty-eight hours.

To avoid these catastrophies of pregnancy fertilization should not be allowed during the second day after ovulation; rather, the fertilizing intercourse should precede ovulation by a day or so.

West Suburban Hospital.

SPINAL ANESTHESIA

A Modified Technique with the Rationale of its Employment in Five Thousand Cases

PAUL PERNWORTH, M. D., F. I., C. A.

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The development of anesthesiology as a surgical and a medical specialty has resulted in the formation of international, national and local societies composed of physicians who devote their

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entire interests to the science of anesthesia and gas therapy. The members of these groups by reason of extensive training and practical clinical experience are unquestionably best prepared to select and administer an individualized anesthetic. Particularly is this true with regard to spinal anesthesia.* In many areas, however, due to lack of specialists or because of certain habitual preferences, the surgeon administers the spinal anesthetic and does the operating as well. It is to this group, definitely not specialists, that we are offering what we believe to be a satisfactory routine procedure based upon experience gained from five thousand spinals. For the "surgeon-anesthetist" the essential requirements for a successful spinal anesthetic technique are: 1. simplicity of administration; 2. prompt onset of effective anesthesia; and, 3. avoidance of severe complications such as respiratory or cardiac failure during the operation.

I SELECTION OF CASES

1. For operations below the umbilicus in adults we feel convinced that spinal anesthesia by the technique to be described, is the agent of choice regardless of preoperative hypertension, hypotention, arteriosclerosis or other systemic conditions usually presented as contraindicating this type of anesthesia.

2. Children and unstable adolescents less than 14 years of age are not recommended as routinely good subjects for temperamental reasons.

3. For operative procedures in the supra-umbilical region of the abdomen (these constituted about 12 per cent of the total series) we use our technique on patients who are between 16 and 60 years of age and who have systolic blood pressures between 110 and 160 with correspondingly relative diastolic readings.

4. Any infectious or inflammatory pathological manifestation of the skin in the region of the lumbar spines precludes aseptic introduction of the spinal needle, and some other type of anesthetic is selected.

If a surgeon will analyze the number of operative procedures performed distal to the umbilicus (hernias, appendectomies, operations on the genitalia, bladder, prostate, sigmoid amputations, etc.) as compared with those done proximal to it within the abdomen he will readily see what a tremendous field has been opened for the employment of this method with but few restrictions as indicated above.

II. PRACTICAL PHYSIOLOGY OF SPINAL ANESTHESIA

Any of the modern spinal anesthetic agents (novocaine, metycaine, nupercaine, pontocaine, spinocaine) when introduced into the subarachnoid space will produce anesthesia of some or all parts of the body depending upon several variable factors. These variables are usually enumerated as: 1) site of injection; 2) position of patient; 3) specific gravity of anesthetic; 4) amount of drugs; 5) amount of dilutant; 6) rapidity of injection; 7) barbotage; 8) direction of the bevel on spinal needle (whether pointing up or down the canal); and 9) specific gravity of spinal fluid. For practical purposes, however, we can eliminate all but five of these variables, viz.: 1) site of injection; 2) specific gravity of anesthetic solution; 3) position of the patient; 4) amount of drug; and 5) amount of diluent. These are the cardinal factors in determining the extent of anesthesia, and we may dismiss the other considerations by stating that: 1) we inject at the rate of about 1 cc. every two seconds; 2) we *never* employ barbotage, feeling that there are other more accurate methods of securing a higher level of anesthesia; 3) we are not interested in the direction of the bevel so long as the opening is entirely within the subarachnoid space; and 4) the sp. gr. of the spinal fluid is of no importance in our technique.

Let us review now how we apply each of these cardinal variables to secure a satisfactory anesthesia.

1. *Site of injection.* For operations below the umbilicus we routinely employ the second lumbar interspace because this is anatomically the widest. For upper abdominal work, we enter one space higher, i. e., between the first and second lumbar vertebrae.

2. *Position of patient.* This is of prime importance. Immediately following the spinal injection every patient is placed in 30 to 40 degrees Trendelenberg with the thighs and legs horizontal so that the instrument tray can be adjusted over the extremities within reach of the surgeon. This position accomplishes two purposes: 1) raises the level of anesthesia to the costal margin or higher, if desired; and 2) prevents cardiac and respiratory failure as will be

discussed subsequently. Furthermore, in pelvic surgery it facilitates excellent exposure of the operative field. In surgical procedures confined to the perineal region (hemorrhoidectomies, vaginal plastics, transurethral prostatic resections, etc.) we sometimes employ a modified Fowler's position thus limiting the anesthetic solution to the distal end of the spinal canal.

3. *Specific gravity of the anesthetic solution.* We employ a hyperbaric solution obtained by dissolving novocaine crystals in spinal fluid. Normal cerebrospinal fluid varies in specific gravity between 1.001 and 1.009. Because we routinely employ the Trendelenberg position for abdominal surgery we need a heavy anesthetic solution to gravitate cephalward. A light solution would ascend into the elevated lower lumbar region and limit our area of anesthesia to the perineum and lower extremities. The abdomen would be unanesthetized. This is one of our objections to pontocaine fluid. This solution has a sp. gr. of 1.0068, lighter than some spinal fluids but heavier than most. Following its injection we do not know whether it is hyperbaric or hypobaric with reference to the particular spinal fluid. There are two methods of remedying this objection to pontocaine: 1) we can add ten per cent glucose to purposely make it hyperbaric, or; 2) we can determine the sp. gr. of the spinal fluid in question by using one drop in a mixture of chlorbenzene and xylol. Knowing the sp. gr. of the two (spinal fluid and pontocaine) we can place the patient in the proper degree of inclination to facilitate our anesthetic solution gravitating toward the costal margins. These are complicated maneuvers to one not accustomed to them and are presented here simply for the purpose of emphasizing that an anesthetic solution heavier than *ANY* spinal fluid should be employed. Novocaine (procaine-neocaine) crystals dissolved in spinal fluid fulfill this requirement.

4. *Amount of anesthetic agent.* Our observations show that surprisingly small amounts of novocaine are required. We have never employed more than 120 mg. in any case. For operations below the umbilicus, 100 mg. give perfect anesthesia and optimum relaxation for about 70 minutes. For upper abdominal work, 120 mg. afford similar operating conditions for about 80 minutes. Surgeons may argue that the duration of anesthesia is not sufficiently long for some procedures. The quiet abdomen, muscular atonia and the ease of exposure, however, materially decreases the operating time as compared with the same case under a general anesthetic. In some lengthy operations it may be necessary to induce analgesia with nitrous oxide or ethylene inhalations to render skin closure entirely painless.

5. *Amount of dilutent.* This refers to the volume of spinal fluid used to dissolve the novocaine crystals. We employ 3 cc. for 100 mg. and 3½-4½ cc. for 120 mg. depending on the approximate length of the individual spinal canal. In a tall subject we inject 4½ cc.; a short patient presents an indication for 3½ cc. Average is 4 cc. for the 120 mg. dose.

III. VASOMOTOR AND RESPIRATORY CHANGES IN RELATION TO SPINAL ANESTHESIA

Our views on the maintainance of a relatively normal blood pressure during spinal anesthesia have changed considerably following an analysis of this series. Previously we administered ephedrine, adrenaline or cobefrin on the evidence of a beginning sustained drop in pressure. Today we feel with Labat that vasoconstricting drugs may be definitely harmful, and that even a marked fall in blood pressure is of little importance as long as the patient is in the Trendelenberg position. Our reason for this attitude is as follows: When a patient under spinal anesthesia begins to shows signs of central vasomotor and/or respiratory paralysis it is not due to the direct action of these drugs on the medullary centers. Co Tui has injected high concentrations of novocaine directly into the fourth ventricle with no evidence of subsequent vasomotor or respiratory depression. The two centers being situated in the floor of the ventricle were of course submerged in the anesthetic solution in his experiments. If direct action of the anesthetic is not responsible for the central depression we must look elsewhere for the cause. We believe that clinical observation has confirmed the explanation advanced by both Labat and Koster for many years. The symptoms of cardiac and respiratory paralysis in spinal anesthesia can be attributed to one factor: cerebral anemia. The following considerations will substantiate this viewpoint. The maintenance of a normal blood pressure depends on proper neurone tone of the vasomotor sympathetic fibers leaving the spinal cord between the first thoracic and the second lumber vertebrae. These fibers supply the involuntary musculature of the

peripheral arterioles. As a spinal anesthetic ascends in the subarachnoid space, it paralyzes more and more of these vasomotor constrictor fibers. Should it ascend to the level of the first thoracic vertebra, there is a complete paralysis of *ALL* efferent sympathetic nerve fibers and a fall in blood pressure to zero, indicating a generalized peripheral vasodilatation. Similarly, a level of anesthesia to the ensiform (7th) causes a paralysis of about 50 per cent of these constrictor fibers, producing a moderate initial fall in blood pressure. This is compensated by increased constriction of those vessels supplied by the intact proximal and unanesthetized nerve segments. In any spinal anesthesia not involving all sympathetic fibers, we can visualize two areas of intra-arteriolar tension: 1) an area of relatively *HIGH* intravascular pressure consisting of those arterioles innervated by the unanesthetized constrictor fibers; and 2) an area of relatively *LOW* intra-arteriolar pressure corresponding to the dilated vascular bed whose innervating fibers have been anesthetized. It follows also that with a high level of anesthesia (including the first thoracic segment) we have no intact constrictor fibers and the entire dilated vascular bed represents an area of decreased arteriolar pressure. The pooled blood contained in this hypotensive area devoid of functioning constrictor fibers will always gravitate toward the most dependent part of the body. Vasoconstrictor drugs such as ephedrine cannot hope to empty this dilated vascular reservoir because its nerve supply which ephedrine must stimulate to produce constriction has already been paralyzed by the spinal anesthetic. To be sure ephedrine will constrict the *INTACT* unanesthetized sympathetic fibers, thus temporarily increasing the blood pressure but this is definitely undesirable and may be even harmful. Constriction of the proximal intact arteriolar musculature can accomplish only one thing: the squeezing of more blood toward the dilated relaxed vascular bed and away from the vital centers in the medulla. Our problem is not to raise the blood pressure by vasoconstriction, which serves only to remove more blood from active circulation, but rather to empty the paralyzed vascular bed and thus secure a greater blood supply to the medullary centers. This can be accomplished in only one way, by placing the patient in the Trendelenberg position and allowing the pooled blood to gravitate cephalward which it will do in every case. Furthermore, this position increases the venous return to the right auricle, facilitates an optimum filling of all cardiac chambers during diastole, and consequently secures a maximum ventricular stroke volume at systole. Instituting the "Head-Low" position early in anesthesia we believe is the best prophylaxis against cerebral anemia with its cardiac and respiratory complications.

IV. TECHNIQUE

1. Preanesthetic medication of seconal gr. ½ one hour before operation. This renders the patient less tense and nervous. Barbiturates also have an antagonistic action to toxic effects produced by novocaine in sensitive individuals.

2. No enema is given on the morning of operation. Frequently the entire enema is not recovered preoperatively and the relaxing effect of the spinal anesthetic results in an evacuation of the remainder on the operating table.

3. The patient is placed on his right side with the back exposed and acutely flexed. The lumbar area is prepared with tincture of merthiolate and draped with three sterile towels. We do not use iodine here because during the operation when the patient is in the supine position the iodine is often prevented from evaporating freely, resulting in vesicular excoriations on the skin.

4. The selected lumbar interspace is marked by an intracutaneous wheal of 1 per cent novocaine in the mid-line, and through this wheal the intervertebral tissues down to the ligamentum subflavum are infiltrated.

5. The tip of a short-beveled spinal needle is now introduced into the subarachnoid space and the cerebrospinal fluid allowed to drip into a vial of novocaine crystals. As indicated above, we use 100 mg. in 3 cc. of fluid for all operations below the umbilicus. For upper abdominal work 120 mg. are dissolved in 3½-4½ cc. depending on the length of the patient's vertebral column as compared with the average.

6. The anesthetic is dissolved completely, the solution drawn up in a 5 cc. syringe, cleared of air-bubbles and injected slowly (1 cc.-2 sec.). Aspiration of about ¼ cc. of spinal fluid is practiced at the beginning and end of injection to demonstrate that the bevel is still in the subarachnoid space. The needle is then withdrawn;

a dressing over the site of puncture is unnecessary.

7. Shoulder-braces are adjusted, and the patient placed immediately in 30° Trendelenberg.

8. No ephedrine or other vasoconstricting drug is given. Anesthesia develops well within the time necessary to prepare the operative field.

9. At the conclusion of the operation the patient is taken to his room on an inclined cart and maintained for six hours in about 20° Trendelenberg by elevating the foot of the bed on blocks. This precaution together with the use of a small-diameter spinal needle (24 gauge) as advocated by Sise and Swinton has practically abolished postoperative headache due to the spinal anesthesia.

SUMMARY

A technique in spinal anesthesia particularly applicable for surgery distal to the umbilicus is presented. The method is simple, and has given uniformly good results in five thousand cases covering a six-year period of clinical study.

This series was presented with the permission of Dr. N. A. Funderburk, director of surgery, Riegel Hospital, Trion, Ga.

707 Broadway.

FUTURE OLD AGE CARE A PROBLEM

According to the welfare bulletin the number of recipients of old age assistants and the outlay from the Illinois State treasury for assistant payments is growing because the population of the state 65 years and over is increasing.

The aged of the State numbered 421,000 and comprised one-twentieth of the population in the latest United States Census (1930). Today there are more than 515,000 persons 65 years of age and over, and twenty years from now in 1960, the estimated 931,000 oldsters will make up one-tenth of the total population of the State. Each aged person is a potential applicant for old age assistance.

The increase in the proportion of older persons in the general population is caused by a decline in the birth rate and the improvements in health and medical science which result in more persons living to a ripe old age.

Think what the increase in the aged population of the State means in terms of the old age assistance program! The present roll of 131,000 recipients comprises about 26.8 per cent of the persons of eligible age. If the percentage remains constant, more than 11,000 recipients will be added to the rolls within the next year, simply because more persons are reaching the age of 65 years. If the present rate continues until 1950, the number of recipients would probably be 189,000, and before 1960 the number would pass the 200,000 mark.

Of course, there are other factors which will enter into the picture, aside from the increase in the aged population. Old Age Insurance payments from the Federal Government to persons who have contributed to the Old Age Insurance plan will begin in 1942. This should decrease the need of old age assistance. Improvements in the economic outlook may make it possible for children to increase contributions for the support of their aged parents. On the other hand, any liberalization in the eligibility requirements of the present Old Age Assistance Act would probably greatly increase the number of recipients.

The increase in the number of recipients in future years will, of course, entail additional outlay for assistance payments. With an average award of $20 per recipient per month, the cost in 1940 will probably be more than $34,000,000, and with an average of $25 per person per month the cost would run close to $43,000,000. If an average of $25 were paid in 1950, the cost is estimated at $57,000,000 per year, or $114,000,000 for a two-year period. Compare this amount with the $27,918,225 paid for assistance payments during the past twelve months.

Such sums of money sound fabulous. State revenues are already stretched to the limit to cover the cost of highways, public education, unemployment relief, the State institutions, and the other ordinary costs of State government. Increased payments for old age assistance must be covered by either an increase in revenues or a decrease in other governmental costs.

4% OF NATIONAL INCOME FOR MEDICAL CARE

A little less than 4% of the national income goes to pay for medical care, according to a report on U. S. consumer expenditures just issued by the National Resources Planning Board. In 1935-36, the year studied, approximately $2,200,000,000 was spent for medical care. However, this covered only three-quarters of the total medical bill of the nation; the rest was met by free services supplied by public and private agencies. The total national income of 59.3 billion dollars in 1935-36 was spent as follows: Food, 29%; housing, 16%; household operations, 9%; clothing, 9%; automobiles, 6½%; medical care, 4%; recreation, 3%; personal care and tobacco, each about 2%; transportation, 1½%; education, less than 1%. Approximately 10% was saved, 4% given away to relatives, friends, churches, philanthropies, and only 1½% as income and other personal taxes.

FOR OPEN NEWS CHANNELS

"There is nothing so important in a democracy as a free and fair dissemination of information. The telegraph, the telephone, and the radio have become almost as important as the press itself."

Reed, who was a candidate for the Democratic nomination for President in 1928, criticized the general principle of government in business.

"In any business that can be conducted by private companies, governmental management is almost invariably a mistake," he added. "Costs increase, and inefficiency in management inevitably results."

Society Proceedings

COMING MEETINGS

April 11—Randolph County Medical Society, 6:30 P. M., Royal Hotel, Chester. Otto S. Krebs, "Management of the Puerperium." Anthony B. Day, "Heart Disease."

April 11—Maternal Welfare Meeting, Monmouth, Dinner, Hawcock's Cafe. Frederick H. Falls, Obstetrics. Clifford Grulee, Pediatrics.

April 12—Will-Grundy County Medical Society, Noon luncheon, Hotel Louis Joliet, Joliet. Dr. John R. Ballinger, "A Brief on Medico-Legal Law."

April 12—Jersey-Greene County Medical Societies, 6:30 P. M., Colonial Hotel. Wm. J. Dieckman, "Vanishing Toxemias of Pregnancy." Julius H. Hess, "The Premature Infant."

April 18—Post Graduate Conference, Dixon, Illinois, State Hospital Assembly Hall, Program from 1:30 P. M. to 9:00 P. M. Julius H. Hess, "Bronchiectasis in Childhood."

Charles M. McKenna, "Diagnosis of Renal Tumors."

Carl V. Moore, "Differential Diagnosis and Treatment of the Hemorrhagic States."

D. K. Kitchen, "The Diagnosis and Therapy of Sexual Immaturity."

Warren G. Murray, "Demonstration of Cases from Dixon State Hospital."

Francis E. Senear, "Dermatology". Cases brought in to be discussed.

Charles B. Puestow, "Influence of Drugs on Intestinal Motility." Moving picture film.

Harold D. Palmer, "Kidney." "Biliary Tract Disease."

Robert S. Berghoff, "Heart Disease."

April 19—Pike County Medical Society, 12:00 Noon, Pittsfield. Dr. James H. Hutton, "The People, The Physicians and the Politicians."

Dr. Thomas D. Masters & Robert J. Masters, "Peptic Ulcer."

April 25—Stephenson County Medical Society, 6:30 P. M., Freeport.

April 26—Will-Grundy County Medical Society, Noon luncheon, Hotel Louis Joliet, Joliet. Budd C. Corbus, "Bladder Tumors."

May 1—Schmitt Memorial Hospital Clinical Conference, 6:15 P. M., Beardstown. H. Close Hesseltine, "Sulfanilamide Therapy in the Obstetric Patient."

May 2—Henry County Medical Society, 6:00 P. M., Kewanee Annual Meeting.

May 3—Will-Grundy County Medical Society, Noon luncheon, Hotel Louis Joliet, Joliet. Eugene Cary, "Causes and Treatment of Prolonged Labor."

May 3—Madison County Medical Society, Alton, Illinois. Lee Connel Gatewood, "Dysentery, Including Amebic Dysentery."

May 8—St. Anthony Hospital Staff, 8:00 A. M., 5:30 P. M., Clinic Day. Refreshments served at noon.

May 10—Jersey-Greene County Medical Society, 6:30 dinner at home of Doctor Gledhill, Jerseyville. Otto H. Schwartz, "The Management of Dystocia." Walter M. Whitaker, "Pneumonia in Childhood."

May 10—Will-Grundy County Medical Society, luncheon, Hotel Louis Joliet.

May 14—Lake County Medical Society, 8:15 P. M. Research Hall, Abbott Laboratories, North Chicago, Harry Mock, "Skull Surgery."

May 14—Bureau County Medical Society, 6:30 P. M., St. Margaret's Hospital, Spring Valley. Sumner L. Koch, "The Immediate Treatment of Extensive Open Wounds."

May 14—Effingham County Medical Society, 6:30 P. M., Benwood Hotel, Effingham. Drew William Luten. "Problems of Heart Disease."

May 16—Stephenson County Medical Society, 6:30 P. M., Freeport.

May 17—Will-Grundy County Medical Society, Noon luncheon, Hotel Louis Joliet, Joliet. Paul C. Bucy, "Brain and Spinal Cord Tumors."

May 24—Will-Grundy County Medical Society, Noon Luncheon, Hotel Louis Joliet, Joliet. Edwin P. Jordan, "Arthritis, Especially Pathology."

May 31—Will-Grundy County Medical Society, Noon luncheon, Hotel Louis Joliet, Joliet. Channing W. Barrett, "Preservation and Restoration of the Function of the Pelvic Floor."

Marriages

RAY BICKERMAN, Peoria, Ill., to Miss Kathryn Louise Eckert in Chicago, February 3.

GEORGE L. KRAFT, Chicago, to Miss Alleen Hoffland, of Soldiers Grove, Wis., February 7.

Personals

Dr. Alfred J. Kobak, Chicago, discussed "Management of Prolonged Labor" before the Madison County Medical Society on February 2.

Dr. William H. Haines has been appointed assistant to Dr. Harry R. Hoffman, director of the Cook County Behavior Clinic. Dr. Haines is assistant clinical professor of neurology at Rush Medical College.

The Chicago Gynecological Society was addressed, March 15, by Drs. William F. Mengert, Iowa City, on prolapse of the umbilical cord, and Philip H. Smith, Evanston, Ill., on hysterectomy.

Dr. Henry H. Kessler, Newark, N. J., among others, addressed the Chicago Orthopaedic Society, March 8, on "Amputations and Prostheses."

The Chicago Society of Internal Medicine was addressed, March 25, among others, by Dr. Ernst Gellhorn, L. Yesinick, M.S., and Chester W. Darrow, Ph.D., on "The Role of the Carotid Sinus in Experimental Convulsions."

Dr. Leon Unger, Chicago, addressed the Macon County Medical Society in Decatur, January 30, on "Newer Phases of Migraine."

At a meeting of the Sangamon County Medical Society in Springfield, February 1, Dr. Lawrence S. Fallis, Detroit, discussed "The Technic of the Repair of Inguinal Hernia Including Fascial Transplants."

Dr. Bela Schick, New York, addressed the Chicago Society of Allergy, March 18, on "Allergy and Immunity."

Dr. Frederic W. Bancroft, New York, discussed "Traumatic Abdomen" before the Chicago Society of Industrial Medicine and Surgery, March 18.

Dr. Edward F. Dombrowski, managing officer of the Chicago State Hospital, was recently made president of the Conference of Managing Officers of the state department of public welfare.

Dr. S. M. Feinberg was invited to speak to the Des Moines Academy of Ophthalmology and Otolaryngology on March 25, subject, "The Present Status of Allergy in Rhinology."

Drs. Joseph Brennemann and Albert H. Montgomery presented a program on "Acute Abdominal Conditions in Children" in LaSalle March 28, sponsored by the Maternal Welfare Committee of the 2nd Councilor District of the Illinois State Medical Society.

Dr. Guy Cushing held a "Surgical Interview" before the DeWitt County Medical Society at Clinton, March 27.

Dr. L. F. Weber was invited to hold a Skin Clinic for the Macoupin County Medical Society at Carlinville on March 28.

Drs. James H. Hutton, Philip H. Kreuscher, Robert S. Berghoff and Frederick H. Falls participated in a Post-Graduate Clinical Conference, sponsored by the doctors of southern Illinois at DuQuoin on March 7.

Dr. Charles Newberger discussed "Reducing the Hazards of Childbirth" before the Will-Grundy County Medical Society on March 8.

Drs. Henry Buxbaum and H. W. Elghammer presented a program on "Indications and Technique of Cephalic and Podalic Version" and "Rheymatic Heart Disease in Children" before the Jersey-Greene County Medical Societies on March 8.

Dr. Clifford J. Barborka addressed the Boone-Story County Medical Societies at Boone, Iowa, on February 23, subject, "Nutrition and Sub-Clinical States of Deficiency Disease."

Dr. Clark W. Finnerud was invited to give a paper on "Diseases of the Skin" before the Vermilion County Medical Society at Danville on March 5.

Dr. Sidney A. Portis discussed "The Differential Diagnosis of Pain of the Right Upper Abdominal Quadrant," before the Lake County Medical Society, at the Mercy Hospital, Gary, Indiana, February 8.

Dr. J. P. Greenhill read a paper in South Bend before the South Bend Medical Society on "Endocrinology in Gynecology," on Feb. 21.

Dr. A. E. Kanter will read a paper on "The Prevention of Abortion With a Discussion of Endocrine Therapy" before the staff of the Schmitt Memorial Hospital, Beardstown, March 6.

Dr. C. Leon Wilson gave talks on obstetrical subjects before the Post Graduate Medical Assembly in Prairie View, Texas, March 4 and 7, and the Medical Institute in Los Angeles, California, March 10 and 14.

Dr. Clark W. Finnerud gave a talk before the Vermilion County Medical Society at Danville, Illinois, Tuesday, March 5, on the "Diagnosis and Treatment of Common Diseases of the Skin," lantern slide demonstration.

Dr. Herman L. Kretschmer read a paper by invitation before the Academy of Medicine at Toronto, Canada, Tuesday, March 5. The title was "Present Trends in Transurethral Prostatic Resection."

Dr. Stanley Gibson gave a paper on "Heart Disease in Childhood" before the Lake County Medical Society on March 12.

Dr. James K. Stack addressed the McLean County Medical Society on the subject of "Fractures," March 12.

Dr. Henry Buxbaum gave a paper on "Prolonged Labor" before the Knox County Medical Society on March 12.

Dr. Harvey S. Allen gave a paper on "Infections of the Hand" before the Effingham County Medical Society on March 12.

Dr. Craig Butler gave a paper on "The Premature Infant" before the Bond County Medical Society on March 12.

Dr. Guy VanAlstyne addressed the McDonough County Medical Society on March 13, subject "Biliary Tract Surgery."

Dr. H. C. Hesseltine spoke on "Obstetric Hemorrhages" before the Bureau County Medical Society on March 14.

Dr. Clifford J. Barborka gave an illustrated lecture on "Medical Management of Gall Bladder Disease" before the Whiteside County Medical Society on March 14.

Dr. Harry A. Oberhelman addressed the Will-Grundy County Medical Society on March 15, subject "Surgical Diseases in Diabetes."

News Notes

—The McDonough County Medical Society recently presented to Dr. Elizabeth R. Miner, Macomb, a check as a token of its appreciation of her work as secretary of the society for the last fifteen years. Dr. Miner was elected for life to this office but has resigned. She and her husband will spend their winters in Florida. She has been delegate to the state medical society for twenty years and has held every office in the county society as well as the office of second vice president of the state society.

—The North Shore Branch of the Chicago Medical Society was addressed at the Sovereign Hotel, April 2, by Drs. Paul C. Barton, director, Bureau of Investigation, American Medical Association, on "Quack Remedies;" Josiah J. Moore, "Cancer Quackery," and Mr. A. M. Simons, assistant director, Bureau of Medical Economics, American Medical Association, "Medical Economic Quackery."

—Dr. William F. Braasch, Rochester, Minn., will be guest speaker at the annual Tri-Chapter banquet of Alpha Kappa Kappa Fraternity at the Chicago Athletic Club April 3. His subject will be "Future Trends in Medicine." Dr. Herman L. Kretschmer will serve as the toastmaster.

—The establishment of the Bernard Portis Research Fellowship Fund in Surgery at Michael Reese Hospital has been announced. The object of the fund, which provides $1,000 annually for a full time fellow, is to arrange research training in surgery for young men who have had basic and fundamental training in surgery. Graduates of recognized medical schools who have had internships in approved hospitals will be considered. Applicants should submit their problems in writing, together with an estimate of facilities and supplies needed, to Dr. Sidney A. Portis, secretary of the newly formed fund. Dr. Bernard Portis died Nov. 1, 1939.

—The third of a series of post-graduate conferences sponsored by the Illinois State Medical Society was held at DuQuoin, March 7. Dr. Gilbert H. Edwards, Pinckneyville, president of the Perry County Medical Society, will preside. The speakers will include:

Dr. Andy Hall, Jr., St. Louis, Urinary Tract Infections.

Dr. Clinton W. Lane, St. Louis, Diagnosis and Treatment of the Common Skin Diseases.

Dr. Joseph C. Jaudon, St. Louis, Problems of the Newborn.

Dr. Robert S. Berghoff, Chicago, heart clinic (four patients).

Dr. Frederick H. Falls, Chicago, Management of Abortion.

Dr. Francis J. Dean Sauer, St. Louis, Hand Infections, Diagnosis and Treatment.

Dr. Philip H. Kreuscher, Chicago, Fracture Problems.

Dr. Charles W. Mayo, Rochester, Minn., Preoperative and Postoperative Care of the Surgical Case.

Dr. James H. Hutton, Chicago, Diagnosis of Endocrine Disorders.

Dr. Edwin S. Hamilton, Kankakee, Voluntary Health Insurance in Illinois.

—The Henry Schmitz Memorial Lecture was delivered by Dr. Francis Carter Wood at a public meeting, March 6, sponsored by the cancer research committee of the Chicago Woman's Club and the Chicago Medical Society. Dr. Wood discussed cancer. The meeting was held at the woman's club following an all day clinical session. At 6:30 the Chicago Medical Society held a reception and dinner in honor of Dr. Wood, who is director of the Institute of Cancer Research at Columbia University College of Physicians and Surgeons, New York. Dr. James Randolph Webster, clinical instructor in dermatology, Rush Medical College, delivered the Mary Redfield Plummer Memorial Lecture, March 7, at the woman's club on "Primary Cancer of the Skin."

—A clinicosurgical week under the direction of The Mayo Foundation will be held May 6 to 11, inclusive. A series of surgical clinics and discussions will be presented with particular em-

phasis on the treatment of cancer. Visiting physicians are invited to attend.

—A LAST REMINDER to make your reservation for the 18th Annual Convention of the Woman's Auxiliary to the American Medical Association to be held at the Hotel Pennsylvania, New York City, June 10 to 14, 1940. New York has much to offer aside from the convention and we are sure you will not want to miss the opportunity of visiting New York this year.

—Temple Fay, M.D., Professor in the Department of Neurology and Neurosurgery, Temple University Hospital, Philadelphia, will discuss "Temperature Factors as Related to Cancer" at the University of Illinois College of Medicine, 1853 West Polk Street, Chicago, on Saturday, April 27, 1940, from ten to eleven o'clock, in Room 423.

This lecture, sponsored by Alpha Omega Alpha, is open to students, faculty members and all interested persons.

—The GEHRMANN LECTURES for 1939-1940 will be delivered in the Medical and Dental College Laboratories Building, 1853 West Polk Street, in Room No. 423, on April 17, 18 and 19, 1940, by Dr. C. A. Elvehjem, Department of Biochemistry, University of Wisconsin, College of Agriculture, Madison, Wisconsin.

Program—April 17, Wednesday, 1 P. M.—Vitamins and Deficiency Diseases; April 18, Thursday, 4 P. M.—Methods of Determining Vitamin Deficiencies; April 19, Friday, 4 P. M. —Vitamins and Normal Nutrition.

DEATHS

ROBERT HENRY BEVERLY, Springfield, Ill.; Bennett Medical College, Chicago, 1912; member of the Illinois State Medical Society; state district health superintendent for the state department of health; aged 61; died, January 22, in St. John's Hospital.

JAMES ERNEST BROOKS, Chicago; Bennett Medical College, Chicago, 1910; member of the Illinois State Medical Society; aged 56; died January 4, of arteriosclerosis and chronic nephritis.

FRANKLIN S. DAVIS, Peoria, Ill.; Chicago Homeopathic Medical College, 1893; a Fellow, A.M.A.; aged 70; on the staff of the Methodist Hospital, where he died, January 27, of pneumonia.

ERNEST ANTHONY EVERETT, O'Fallon, Ill.; St. Louis University School of Medicine, 1906; member of the Illinois State Medical Society; aged 56; died, January 19, in St. Elizabeth's Hospital, Belleville, of coronary thrombosis.

HENRY B. DOWNS, Danville, Ill.; St. Louis College of Physicians and Surgeons, 1898; formerly a minister and lawyer; aged 80; died, January 21, in the Lake View Hospital of chronic myocarditis.

WILLIAM ALBION DULANEY, Wayne City, Ill.; St. Louis University School of Medicine, 1905; aged 66; died, January 21, of myocarditis.

JAMES B. DUNHAM, Wenona, Ill.; Hahnemann Medical College and Hospital, Chicago, 1881; aged 85; died, January 10, of myocarditis.

JAMES WEST HINGSTON, Chicago; Hahnemann Medical College and Hospital, Chicago, 1882; aged 81; died, January 29, in the West Suburban Hospital, Oak Park, Ill., of hypertrophy of the prostate.

STONEWALL W. JOHNSON, Sullivan, Ill.; Homeopathic Medical College of Missouri, St. Louis, 1887; formerly mayor and health officer; aged 76; died, January 19, of chronic nephritis.

BENJAMIN E. JONES, Rock Island, Ill.; Louisville (Ky.) Medical College, 1884; for many years medical director of the Modern Woodmen of America; aged 79; died, January 17, in Davenport, Iowa, of gastrointestinal hemorrhage.

ALBERT FREDERICK KAESER, Highland, Ill.; University of Illinois College of Medicine, Chicago, 1901; a Fellow, A.M.A.; served during the World War; at one time bank president; on the staff of St. Joseph's Hospital; aged 61; died, January 28, in the Barnes Hospital, St. Louis.

JAMES HARRISON RACHELS, Danville, Ill.; Meharry Medical College, Nashville, Tenn., 1908; aged 60; died, January 16, in St. Elizabeth Hospital of a ruptured esophagus resulting from hiccoughs.

CLARA C. STERLING, Chicago; Hering Medical College, Chicago, 1907; aged 71; died, January 4, in the Middle Georgia Hospital, Macon, of myocarditis.

ARTHUR FRANKLIN STOTTS, Galesburg, Ill.; Medico-Chirurgical College of Philadelphia, 1899; a Fellow, A.M.A.; fellow of the American College of Surgeons; served during the World War; on the staff of the Galesburg Cottage Hospital; aged 64; died, January 9, of angina pectoris.

GEORGE M. STRAIGHT, Winchester, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; for many years county physician; aged 82; died, January 23, of coronary thrombosis.

CHARLES BRENTANO WAGNER, Chicago; Chicago Medical College, 1888; on the staff of the Evangelical Deaconess Hospital; aged 74; died, January 18, in the Illinois Masonic Hospital of pneumonia.

AUGUSTUS S. WARNER, Chicago; Northwestern University Medical School, Chicago, 1895; a fellow, A.M.A.; aged 71; died, January 18, in the West Suburban Hospital, Oak Park, Ill., of coronary thrombosis.

C. V. ARTHUR WEICHELT, Barrington, Ill.; Jenner Medical College, Chicago, 1900; served during the World War; aged 70; died, January 4, in the Veterans Administration Facility, North Chicago, of cerebral arteriosclerosis.